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CHARACTERISTICS OF BEEF CATTLE FEEDLOTS

CALIFORNIA

COLORADO

WESTERN CORN BELT

MARKETING RESEARCH REPORT NO. 840
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CONTENTS

	Page
Highlights	iii
Introduction	1
The Study	1
Sampling Method and Rate	2
Data Collection	3
Limitations	3
Cattle Feedlot Operations	4
Organization for Feedlot Operations	4
Longevity of Operation	4
Principal Business of Owner	4
Type of Ownership Operations	7
Selection of Cattle for Feeding	7
Cattle Placed on Feed and Marketed	7
Type of Buyer	9
Type of Market	12
Breeds and Geographic Origin	12
Placements by Sex	17
Grades of Placements	18
Weights of Placements	20
Feeding and Marketing	20
Months Placed on Feed	20
Length of Time on Feed	23
Death Loss and Marketing Loss	23
Ownership of Cattle	23
Custom Feeding	25
Grades Marketed	27
Weights Marketed	27
Selling Agencies	30
Selling Arrangements	30
Geographic Area of Sales Outlet	33
Operating Example	33
Input Requirements	37
Rations	37
Source of Capital	37
Source of Market Price Information	39
Labor Requirement and Cost	39
Conclusions	42
Appendix Tables	44

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HIGHLIGHTS

A 1966-67 study of the three major U.S. cattle-feeding areas has provided new information to aid individual firms in making management and production decisions.

The study showed that the number of feedlots in the western Corn Belt exceeded the number in California or Colorado, but feedlots tended to be smaller in the western Corn Belt. In 1967, western Corn Belt feeders placed about 4.8 million head of cattle on feed in Iowa and Minnesota. Nebraska feeders placed approximately 3.1 million head on feed in 1967; however, the proportion of those on feed in the northeast district is impossible to determine. Colorado feeders placed just over 1.3 million head on feed in 1967, and California feeders placed about 2.0 million head.

The majority of the cattle fed in California were English and English crossbreeds; Okies were the second most popular type. Colorado fed more English and English crossbreeds than any other types. English was the most popular breed of cattle in the western Corn Belt.

Of cattle placed on feed in California, 37 percent were from Texas and 31 percent were native California cattle. In Colorado, 29 percent placed on feed were native cattle and 25 percent were Texas cattle. Of cattle fed in the western Corn Belt, 20 percent were native cattle. The plains States supplied the western Corn Belt with a large number of cattle.

Order buyers were the most important category of buyers of feedlot cattle in all regions. The second most important buyer category in California was the miscellaneous (other) category, which included dealers and terminal commission men. Operators were the second most important buyer category in Colorado and the western Corn Belt.

Feedlots in California relied on auctions and farms and ranches as market sources of feeder cattle. In Colorado, farms and ranches were the most important source, but a large proportion were purchased at auctions. Auctions and farms and ranches were the most important sources of feeder cattle for the western Corn Belt.

The peak months of cattle placements for California occurred in September, October, and June. September and October were the peak placement months for Colorado and the western Corn Belt.

The majority of cattle were on feed from 120 to 149 days in all three regions. The western Corn Belt had the greatest percentage on feed for over 150 days. In the California sample, almost all of the cattle were on feed 120 to 149 days.

Feedlot owners in Colorado and the western Corn Belt usually owned cattle on feed. In California, the cattle were not usually owned or financed by feedlot owners. Custom feeding tended to be more important in California and Colorado than in the western Corn Belt. Twenty-seven percent of the feedlots in California and 18 percent in Colorado custom fed. In the western Corn Belt, only 5 percent custom fed.

The majority of cattle marketed in each region were categorized by feedlot owners as "choice." Of cattle marketed by California, more were in the 1,000- to 1,099- pound weight category than in any other. In Colorado, more weighed 900 to 999 pounds, and in the western Corn Belt, more weighed 1,100 to 1,199 pounds.

Owners were the major selling agents of cattle in Colorado and the western Corn Belt. California depended heavily on salaried salesmen. Most cattle in each region were sold on a direct live weight basis. Shrink assessment was most common and was about 4 percent. Most cattle were marketed within their respective regions.

* * *

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CHARACTERISTICS OF BEEF CATTLE FEEDLOTS: CALIFORNIA, COLORADO, WESTERN CORN BELT

by

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INTRODUCTION

Since World War II, the cattle feeding industry has grown rapidly and the number of feedlots and number of cattle marketed through feedlots have increased greatly. Traditionally, the Corn Belt has been the center of cattle feeding, but, in recent years, the industry has expanded more in the western and southwestern regions, thus decreasing the importance of the central area.

Accompanying this growth have been changes in several dimensions of feeding operations. Large commercial feedlots have come into existence. Farmer feeding operations have expanded. Feedlots have become integrated both vertically and horizontally. Custom feeding has been important in the growth of the feeding industry, especially in the West. Farmer feeding has remained centered in the central part of the United States with an increase in number of feedlots and cattle fed. The demand for beef and beef products has been strong and has assisted in the growth of the industry. Changes in technology, equipment, management, and nutrition have assisted in the growth and provided means for changes to occur.

THE STUDY

The basic objective of this report is to describe characteristics of cattle feeding operations in three major cattle feeding regions in the United States during the study period of July 1, 1966, to June 30, 1967. The three regions were chosen because their feeding operations are generally regarded as being considerably different from each other. 1/ Emphasis is placed on organization for feedlot operations and feeding and marketing which includes procurement and selling practices.

1/ Major cattle feeding regions were defined as follows: (1) California. (2) Colorado (Crop Reporting Districts 2, 6, and 9). (3) western Corn Belt (Minnesota Crop Reporting Districts 4, 5, 6, 7, 8, and 9; Iowa Crop Reporting Districts 1, 2, 4, 5, and 7; and Nebraska Crop Reporting District 3).

Due to growth, exit and entry of firms, new technology, and changing ownership, there have been rapid and continuous changes in the structure of the cattle-feeding industry. Data describing feedlot characteristics in the early 1960's are considered by many associated with the industry as no longer portraying cattle-feeding operations of the mid-1960's. Knowledge of timely data describing characteristics of the industry provides an improved basis for marketing and production decisions of individual firms. In the study, time series data were updated so that they could be used for research by the segments of the industry needing various types of market news and other market information.

Sampling Method and Rate

The sample of feedlots was drawn from three major cattle feeding regions in the United States (fig. 1) by the Statistical Reporting Service of the U.S. Department of Agriculture. A sample of feedlots reported by SRS as having a capacity of over 1,000 head was drawn at a 25- to 50-percent sampling rate in the western Corn Belt and Colorado, depending on size of lot (app. table 24). The sample of lots indicated as having a capacity of over 1,000-head in California were drawn at only a 10-percent rate because of anticipated higher costs of data collection stemming from a wider geographic dispersion. An absolute number of operators of lots with a capacity of less than 1,000-head were selected for interview in each region as selected case studies. (The cost of collecting data from a statistically selected sample of the 88,000 small lots in the western Corn Belt would be prohibitive.)

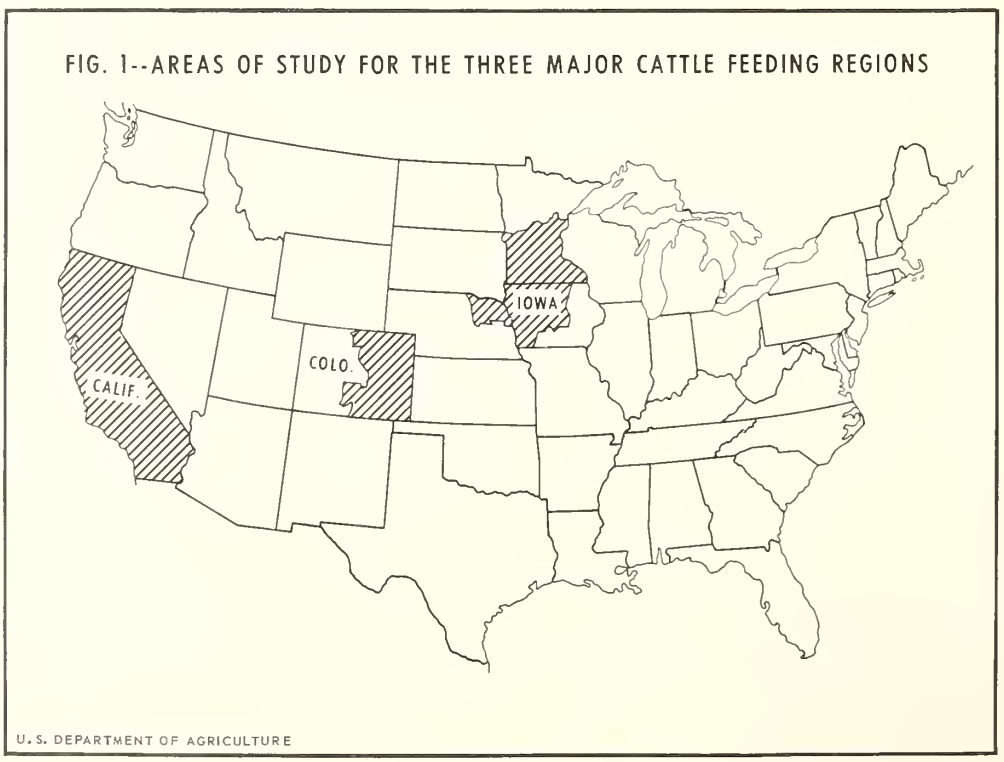

Figure 1.

Each State's statistical reporting service unit selected the sample of feedlot operators according to State and crop reporting district for States or parts of States included. The feedlots for each State were arranged according to predefined feedlot-capacity size categories and owners or operators were listed alphabetically under each size category. From this feedlot population list, the primary sample of feedlots for each size category and each region was selected (app. table 25). If the number of feedlots on the primary list for any size category of a feeding region exceeded five, a replacement sample of 10 percent was drawn for that size category in the region.

Data Collection

Data were collected by field enumerators using a prepared schedule. Enumerators contacted feedlot operators or owners and conducted interviews to obtain information. Schedules completed did not correspond with the sampling rate specified by the sampling plan (app. table 25). Reasons for not completing schedules for lots in the sample fall into one of three categories: (1) Cattle were not being fed in the lot that year, (2) cooperation was refused by the operator, and (3) the feedlot operators could not be located by the interviewer. The term "unable to locate" is used in this report to indicate lack of adequate direction, respondent not home, or lack of time to make repeated recalls.

A total of 157 schedules were completed. There were 22 completions in California, 45 in Colorado, and 90 in the western Corn Belt. California was used as one major cattle feeding region, with eight schedules completed for the feedlots with a capacity of less than 1,000 head, two for those with a capacity of 1,000 to 1,999, seven for those with a capacity of 2,000 to 7,999, and five for the lots with a capacity of 8,000 and over. Eastern Colorado yielded 16, seven, 12, and 10 schedules, respectively, in the four size categories. The third major cattle region was composed of parts of Nebraska, Iowa, and Minnesota, and designated as the western Corn Belt region. There were 47 schedules completed in feedlots with a capacity of less than 1,000, 25 in those with a capacity of 1,000 to 1,999, and 18 in those with a capacity of 2,000 to 7,999 for this region. Although there were a few cattle feedlots with a capacity of 8,000 head or more in the western Corn Belt, these feedlots were not selected in the sample.

Limitations

The basic limitation of the study was its case-study nature, especially for the small feedlots in the western Corn Belt and Colorado and all feedlots in California. The 43 schedules completed for lots having a capacity of over 1,000-head in the western Corn Belt cover approximately 16 percent of all lots reported in this size category. Similarly, the 29 schedules completed on lots having a capacity of over 1,000-head in Colorado cover approximately 31 percent of all lots reported in this size category. On the other hand, only 7 percent of the operators of feedlots with a capacity of over 1,000 head in California were interviewed. Therefore, the reader can make inferences as to the population of lots having a capacity of over 1,000-head in the western

Corn Belt and Colorado but not in California. The use of survey results to interpret characteristics of the population of small lots was never intended. But the summaries of findings from the sample do provide data on basic characteristics of all sizes of feedlots in the regions by size of operation.

CATTLE FEEDLOT OPERATIONS

Organization for Feedlot Operations

Longevity of Operation

Most feedlot operations in the sample have been in existence for many years, but some had different owners. Fifty-six percent of the feedlots fed cattle 15 or more years prior to the study period (1966-67) and 32 percent fed more than 20 years prior to 1966-67 (table 1). Six percent began feeding operations within the 3 years prior to the study period, and 15 percent of the operations came into existence in the 5 years prior to this period.

Colorado had the largest percentage of firms in the sample entering in the 3 years prior to the study period. California and the western Corn Belt had 4 percent in this category. In general, most feeding operations surveyed had been in existence for more than 15 years prior to 1966-67 and all regions had firms entering in the 3 years prior to this period.

Principal Business of Owner

The principal business of feedlot owners gives some indication of integration and specialization in the feedlot industry. The principal business of the owners was usually given as cattle feeding, but other major interests may have influenced the type of feeding operation.

Although cattle feeding was the principal business of most owners, 41 percent were general farmers (table 2). Only 10 percent indicated that principal business was classed as "other"--those who did were meatpackers, feed company operators, retailers, etc. Cattle feeding did play a major role in the overall operation of most feedlot owners. A relationship apparently does exist between size of feedlot and the principal business of owner. As the capacity of the feedlot increases, the proportion of owners whose principal business is feeding increases.

The principal business of owners in Colorado was classed as "feeder," but in the western Corn Belt it was almost evenly distributed between "feeder" and "general farmer." Feedlots with a capacity of less than 1,000 head were usually a part of a general farming operation.

Table 1.--Number and percentage of cattle feedlot operations, by longevity categories, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Longevity of cattle feeding operations in years						
	Less than 3	3 to 5	6 to 9	10 to 14	15 to 20	More than 20	Total
	Years	Years	Years	Years	Years	Years	Years
Western Corn Belt	3	5	9	15	23	31	86
Less than 1,000	2	5	3	8	12	14	44
1,000-1,999	---	---	5	3	8	9	25
2,000-7,999	1	---	1	4	3	8	17
California	1	3	6	3	5	4	22
Less than 1,000	---	---	1	1	3	3	8
1,000-1,999	---	1	---	1	---	---	2
2,000-7,999	---	1	3	1	1	1	7
8,000 and over	1	1	2	---	1	---	5
Colorado	5	5	8	4	9	14	45
Less than 1,000	3	2	2	1	4	4	16
1,000-1,999	1	1	2	---	2	1	7
2,000-7,999	1	---	3	---	1	7	12
8,000 and over	---	2	1	3	2	2	10
Total	9	13	23	22	37	49	1/153
Less than 1,000	5	7	6	10	19	21	68
1,000-1,999	1	2	7	4	10	10	34
2,000-7,999	2	1	7	5	5	16	36
8,000 and over	1	3	3	3	3	2	15
	Percentage distribution						
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	4	6	10	17	27	36	100
Less than 1,000	5	11	7	18	27	32	100
1,000-1,999	---	---	20	12	32	36	100
2,000-7,999	6	---	6	23	18	47	100
California	4	14	27	14	23	18	100
Less than 1,000	---	---	12	12	38	38	100
1,000-1,999	---	50	---	50	---	---	100
2,000-7,999	---	14	44	14	14	14	100
8,000 and over	20	20	40	---	20	---	100
Colorado	11	11	18	9	20	31	100
Less than 1,000	19	12	12	7	25	25	100
1,000-1,999	14	14	29	---	29	14	100
2,000-7,999	8	---	25	---	8	59	100
8,000 and over	---	20	10	30	20	20	100
Total	6	9	15	14	24	32	100
Less than 1,000	7	10	9	15	28	31	100
1,000-1,999	3	6	21	12	29	29	100
2,000-7,999	6	3	19	14	14	44	100
8,000 and over	7	20	20	20	20	13	100

1/ Four operators did not respond.

Table 2.--Number and percentage of feedlot owners, classified by principal business of owners, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Principal business of owners				
	Feeder	Rancher	General farming	Other 1/	Total
	Number	Number	Number	Number	Number
Western Corn Belt	41	2	42	5	90
Less than 1,000	14	---	31	2	47
1,000-1,999	16	1	7	1	25
2,000-7,999	11	1	4	2	18
California	6	3	6	7	22
Less than 1,000	---	1	4	3	8
1,000-1,999	1	---	1	---	2
2,000-7,999	3	1	1	2	7
8,000 and over	2	1	---	2	5
Colorado	23	1	17	4	45
Less than 1,000	4	---	11	1	16
1,000-1,999	4	---	1	2	7
2,000-7,999	7	1	4	---	12
8,000 and over	8	---	1	1	10
Total	70	6	65	16	157
Less than 1,000	18	1	46	6	71
1,000-1,999	21	1	9	3	34
2,000-7,999	21	3	9	4	37
8,000 and over	10	1	1	3	15
	Percentage distribution				
	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	45	2	47	6	100
Less than 1,000	30	---	66	4	100
1,000-1,999	64	4	28	4	100
2,000-7,999	61	6	22	11	100
California	27	14	27	32	100
Less than 1,000	---	12	50	38	100
1,000-1,999	50	---	50	---	100
2,000-7,999	43	14	14	29	100
8,000 and over	40	20	---	40	100
Colorado	51	2	38	9	100
Less than 1,000	25	---	69	6	100
1,000-1,999	57	---	14	29	100
2,000-7,999	59	8	33	---	100
8,000 and over	80	---	10	10	100
Total	45	4	41	10	100
Less than 1,000	25	1	65	9	100
1,000-1,999	62	3	26	9	100
2,000-7,999	57	8	24	11	100
8,000 and over	66	7	7	20	100

1/ Other includes meatpackers, feed companies, retailers, etc.

Type of Ownership Operations

The majority of the feedlots, 51 percent, were single proprietorships (table 3). Partnerships composed one-fourth of the ownership organization; cooperatives composed only 4 percent. Single proprietorships and partnerships were more prevalent for small feedlots; corporative ownership was more prevalent for large feedlots. Of the 71 feedlots with a capacity of less than 1,000 head, 48 were single proprietorships. On the other hand, of the 15 feedlots with a capacity of 8,000 and over, 10 were corporations.

Corporation ownership was more prevalent than other types of ownership in California. However, the second largest type was single proprietorship. In Colorado, the corporation was the most prevalent type of ownership and the partnership was second. The majority of the western Corn Belt feedlot owners (66 percent) were single proprietors.

Two types of cattle feeding operations considered were warmup operations and finishing operations. Warmup feedlots feed cattle over a short period of time until they are sold or moved for any reason other than for slaughter. In finishing feedlots, cattle are fed until they are ready for slaughter. Of the 156 responses on type of feeding operation, 94 percent were finishing operations (app. table 26). Only nine of the owners indicated they had warmup operations. Most warmup feedlots had a capacity of less than 1,000. Approximately 9 percent of the feedlots in California and Colorado were warmup operations and all but one of these feedlots had a capacity of less than 2,000 head. In the western Corn Belt, only 3 percent were warmup operations. Perhaps small feedlots which are integrated with other types of farming find it advantageous to incorporate warmup rather than finishing operations, thereby supplementing their overall operations.

Specialized feedlots feed only cattle, whereas diversified feedlots feed at least one other species of livestock.

Ninety of the 156 owners or operators indicated they fed only cattle (app. table 27). The large feedlots with a capacity of 2,000 head and over, tended to specialize in cattle feeding. Smaller feedlots tended to be diversified. Sheep were second to cattle in number of farm animals fed in California and Colorado; hogs were second in number fed in the western Corn Belt.

Selection of Cattle for Feeding

Cattle Placed on Feed and Marketed

Although there were relatively more feedlots in the sample with a capacity of less than 2,000 head, the number of cattle placed on feed and marketed was a relatively small proportion of all cattle in the sample. The number of large feedlots in the sample was relatively small, but the majority of the cattle placed on feed and marketed were handled by large feedlots. The placement-capacity ratio was computed by determining the average capacity of the feedlots in each size category and dividing this average into the average

Table 3.--Number and percentage of cattle feedlot operations by type of ownership, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Type of ownership				
	Single proprietorship	Partnership	Cooperative	Corporation	Total
	Number	Number	Number	Number	Number
Western Corn Belt	60	23	2	5	90
Less than 1,000	36	11	---	---	47
1,000-1,999	14	9	1	1	25
2,000-7,999	10	3	1	4	18
California	9	2	1	10	22
Less than 1,000	6	1	---	1	8
1,000-1,999	---	1	---	1	2
2,000-7,999	3	---	---	4	7
8,000 and over	---	---	1	4	5
Colorado	12	14	3	16	45
Less than 1,000	6	9	---	1	16
1,000-1,999	3	---	2	2	7
2,000-7,999	2	3	---	7	12
8,000 and over	1	2	1	6	10
Total	81	39	6	31	157
Less than 1,000	48	21	---	2	71
1,000-1,999	17	10	3	4	34
2,000-7,999	15	6	1	15	37
8,000 and over	1	2	2	10	15
	Percentage distribution				
	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	66	26	2	6	100
Less than 1,000	77	23	---	---	100
1,000-1,999	56	36	4	4	100
2,000-7,999	55	17	6	22	100
California	41	9	5	45	100
Less than 1,000	75	13	---	12	100
1,000-1,999	---	50	---	50	100
2,000-7,999	43	---	---	57	100
8,000 and over	---	---	20	80	100
Colorado	27	31	7	35	100
Less than 1,000	38	56	---	6	100
1,000-1,999	42	---	29	29	100
2,000-7,999	17	25	---	58	100
8,000 and over	10	20	10	60	100
Total	51	25	4	20	100
Less than 1,000	68	29	---	3	100
1,000-1,999	50	29	9	12	100
2,000-7,999	41	16	2	41	100
8,000 and over	7	13	13	67	100

placements for feedlots in the corresponding size category (table 4). A ratio of one indicates that feedlots in any particular size category placed the same volume of cattle on feed as the average of their feedlot capacity. A ratio greater than one indicates that feedlots were filled more than once.

There was a tendency for the placement-capacity ratio to be larger for the large feedlots than for small ones. This increase in the ratio indicates that large feedlots tend to fill lots and to market cattle more frequently than small lots. Since the average length of time on feed varies, the turnover rate does not indicate utilization of capacity. Utilization of capacity cannot be measured for lots of a capacity of less than 1,000 head or more than 8,000 head. However, data on average length of time on feed can be used to measure average use of capacity for the 1,000- to 1,999- and 2,000- to 7,999-head groups. Assuming that cattle on feed for less than 90 days average a 60-day feeding period and those on feed for over 180 days average 200 days on feed, capacity utilization can be computed. A 40-60 percent capacity utilization was calculated for these two groups. Colorado feeders in the sample used their lot capacity more efficiently than those in the western Corn Belt.

Type of Buyer

More than half (58 percent) of the cattle placed on feed were purchased by order buyers and 26 percent were purchased by feedlot operators (table 5). The other types of purchasing agents (salaried buyers and others) have a minor role in purchasing feedlot cattle. No definite relationship was apparent between size of feedlot and type of buyer except that salaried buyers and other buyers were relatively more important to large feedlots in the sample.

Order buyers purchased most California cattle. Salaried buyers were important purchasing agents only in the large California feedlots. For feedlots with less than 2,000 capacity in California, the operators did the majority of purchasing. Lots with a capacity of 2,000 and over depended primarily on order and other buyers.

Order buyers were also the most important buyers for Colorado where they purchased 74 percent of the cattle. In Colorado, for feedlots with a capacity of less than 2,000, operators purchased the largest volume, but the order buyer was the most important buyer type for feedlots with a capacity of 2,000 or more.

Order buyers purchased the largest volume of the cattle in the western Corn Belt, but they were not as important as in Colorado. Operators in the western Corn Belt tended to do relatively more of their own cattle buying. Feedlots with a capacity of less than 1,000 depended primarily on order buyers, as did all sizes of feedlots in the western Corn Belt sample. For feedlots with a capacity of less than 1,000, operators purchased 33 percent. Operators of lots with capacity of 1,000 to 1,999 and 2,000 to 7,999 purchased 45 percent and 47 percent, respectively, of their cattle.

Table 4.--Number and percentage of cattle placed on feed, and number marketed, placement-capacity ratios, and average size and median size, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Cattle placed on feed and marketed						
		Placed on feed		Marketed		Placement-capacity	Average size placement	Median size placement
	Number	Number	Percent	Number	Percent	Ratio average	Number	Number
Western Corn Belt	90	155,008	100	154,336	100		1,723	1,200
Less than 1,000	47	24,628	16	25,036	16	1.27	524	166
1,000-1,999	25	46,280	30	46,200	30	1.44	1,851	1,600
2,000-7,999	18	84,100	54	83,100	54	1.55	4,672	4,250
California	21	201,162	100	173,699	100		9,579	2,000
Less than 1,000	8	4,600	2	4,599	3	1.84	575	230
1,000-1,999	1	1,800	1	1,750	1	1.00	1,800	1,800
2,000-7,999	7	46,850	23	46,850	27	1.49	6,693	7,500
8,000 and over	5	147,912	74	120,500	69	1.52	29,582	27,800
Colorado	45	331,544	100	321,514	100		7,367	3,400
Less than 1,000	16	11,435	3	10,875	3	1.41	715	356
1,000-1,999	7	20,290	6	19,731	6	1.77	2,899	3,000
2,000-7,999	12	71,595	22	62,617	20	1.60	5,966	4,600
8,000 and over	10	228,224	69	228,291	71	1.80	22,822	27,707
Total		687,714	100	649,549	100	---	---	---

Table 5.--Number and percentage of cattle placed on feed, by type of buyer, for geographic regions and feedlot capacity size categories, July 1966 to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Type of buyer				
		Operator	Salaried buyer	Order buyer	Other buyers	Total
	Number	Number	Number	Number	Number	Number
Western Corn Belt	88	71,209	---	87,334	935	159,478
Less than 1,000	47	7,965	---	15,058	935	23,958
1,000-1,999	25	23,300	---	28,120	---	51,420
2,000-7,999	16	39,944	---	44,156	---	84,100
California	21	37,824	38,546	70,393	54,400	201,163
Less than 1,000	8	3,690	---	360	550	4,600
1,000-1,999	1	---	---	1,800	---	1,800
2,000-7,999	7	13,824	---	17,427	15,600	46,851
8,000 and over	5	20,310	38,546	50,806	38,250	147,912
Colorado	44	66,305	15,571	231,558	---	313,434
Less than 1,000	16	8,055	300	3,080	---	11,435
1,000-1,999	7	8,563	3,200	8,527	---	20,290
2,000-7,999	12	30,688	---	40,908	---	71,596
8,000 and over	9	18,999	12,071	179,043	---	210,113
Total	153	175,338	54,117	389,285	55,335	674,075
Less than 1,000	71	19,710	300	18,498	1,485	39,993
1,000-1,999	33	31,863	3,200	38,447	---	73,510
2,000-7,999	35	84,456	---	102,491	15,600	202,547
8,000 and over	14	39,309	50,617	229,849	38,250	358,025
	Percentage distribution					
		Percent	Percent	Percent	Percent	Percent
Western Corn Belt		45	---	55	1/	100
Less than 1,000		33	---	63	4	100
1,000-1,999		45	---	55	---	100
2,000-7,999		47	---	53	---	100
California		19	19	35	27	100
Less than 1,000		80	---	8	12	100
1,000-1,999		---	---	100	---	100
2,000-7,999		30	---	37	33	100
8,000 and over		14	26	34	26	100
Colorado		21	5	74	---	100
Less than 1,000		70	3	27	---	100
1,000-1,999		42	16	42	---	100
2,000-7,999		43	---	57	---	100
8,000 and over		9	6	85	---	100
Total		26	8	58	8	100
Less than 1,000		49	1	46	4	100
1,000-1,999		43	5	52	---	100
2,000-7,999		42	---	50	8	100
8,000 and over		11	14	64	11	100

1/ Less than 1 percent.

Type of Market

One of the most evident changes in the livestock industry is the manner in which cattle are marketed. Terminal markets were once the most important type of market. Auction markets were and still are an important source of supply for feed cattle. The number of auction markets reached a peak in 1952; since then, direct buying has been increasing.

In the lots surveyed, the majority of cattle placed on feed (53 percent) were purchased at auction markets. Cattle purchased on farms and ranches accounted for 40 percent of the cattle placed on feed. Terminal markets accounted for only 7 percent of the total 667,054 cattle placed on feed (table 6).

Operators of feedlots of all sizes in California depended primarily on auctions as a source of feedlot cattle.

Colorado operators depended on auctions and farms and ranches as primary sources of cattle placed on feed, with an equal proportion being obtained from each.

Feedlots with a capacity of less than 1,000 and those with a capacity of 8,000 or more depended on auction markets for the majority of their cattle. The middle-sized lots depended on farms and ranches as the major source. Terminal markets were more important to the lots with a capacity of 8,000 and over than to lots of smaller capacities.

Cattle purchases in the western Corn Belt were equally distributed between auction markets and farms and ranches. Terminal markets served as a minor source of cattle in this region. Feedlots with a capacity of less than 1,000 depended on auction markets for the majority of their cattle. Feedlots with a capacity of 1,000 to 1,999 depended on farms and ranches for the majority of their cattle. Feedlots with a capacity of 2,000 to 7,999 obtained an equal number of cattle from auction markets and farms and ranches. Terminal markets were the source of 9 percent of the cattle for the lots with a capacity of less than 1,000, 6 percent for the lots with a capacity of 1,000 to 1,999, and 10 percent for lots with a capacity of 2,000 to 7,999.

Breeds and Geographic Origin

From July 1, 1966, to June 30, 1967, the majority of cattle placed on feed, 80 percent, were English breeds and English crossbreeds. Okies 2/ were the second most popular breed placed on feed (tables 7 and app. table 28).

Most of the feedlot operators expressed a preference for English and English crossbreeds because of their hardiness and efficiency. Hereford, Angus, and Hereford-Angus were the types of cattle most preferred by operators.

2/ Okies are cattle with color patterns reflecting multibreeding and indicating some dairy breeding in a distant generation, but excluding any Brahma or noticeable Charolais breeding.

Table 6.--Number and percentage of cattle fed by type of market from which cattle originated, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Type of market			
		Farm and ranch	Terminal	Auction	Total
	Number	Number	Number	Number	Number
Western Corn Belt	86	70,441	13,319	70,550	154,310
Less than 1,000	45	9,832	2,251	11,846	23,929
1,000-1,999	25	22,860	2,580	20,840	46,280
2,000-7,999	16	37,749	8,488	37,864	84,101
California	21	46,703	17,203	137,256	201,162
Less than 1,000	8	1,569	---	3,031	4,600
1,000-1,999	1	---	---	1,800	1,800
2,000-7,999	7	17,450	1,875	27,525	46,850
8,000 and over	5	27,684	15,328	104,900	147,912
Colorado	45	149,825	16,780	144,977	311,582
Less than 1,000	16	3,614	100	6,085	9,799
1,000-1,999	7	12,323	596	7,371	20,290
2,000-7,999	12	38,118	2,997	30,480	71,595
8,000 and over	10	95,770	13,087	101,041	209,898
Total	152	266,969	47,302	352,783	667,054
Less than 1,000	69	15,015	2,351	20,962	38,328
1,000-1,999	33	35,183	3,176	30,011	68,370
2,000-7,999	35	93,317	13,360	95,869	202,546
8,000 and over	15	123,454	28,415	205,941	357,810
	Percentage distribution				
		Percent	Percent	Percent	Percent
Western Corn Belt		46	8	46	100
Less than 1,000		41	9	50	100
1,000-1,999		49	6	45	100
2,000-7,999		45	10	45	100
California		23	9	68	100
Less than 1,000		34	---	66	100
1,000-1,999		---	---	100	100
2,000-7,999		37	4	59	100
8,000 and over		19	10	71	100
Colorado		48	5	47	100
Less than 1,000		37	1	62	100
1,000-1,999		61	3	36	100
2,000-7,999		53	4	43	100
8,000 and over		46	6	48	100
Total		40	7	53	100
Less than 1,000		39	6	55	100
1,000-1,999		51	5	44	100
2,000-7,999		46	7	47	100
8,000 and over		34	8	58	100

Table 7.--Number and percentage of cattle placed on feed, by breeds and crossbreeds, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Percentage distribution							
	English and English crossbreeds	Brahma and Brahma crossbreeds	Okies	Dairy breeds and dairy crossbreeds	Santa Gertrudis, Charolais, and crossbreeds	Mexican cattle	Other	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	83	1	7	7	2-	---	---	100
Less than 1,000	85	2	1	11	1	---	---	100
1,000-1,999	82	1/	7	8	3	---	---	100
2,000-7,999	83	1	10	5	1	---	---	100
California	69	8	12	6	1	4	---	100
Less than 1,000	82	3	---	12	3	---	---	100
1,000-1,999	99	---	---	---	1	---	---	100
2,000-7,999	69	7-	6	3	1/	15	---	100
8,000 and over	69	8	15	6+	1	1	---	100
Colorado	85	3	6	4	1	1	1/	100
Less than 1,000	98	---	---	2	1/	---	---	100
1,000-1,999	99	---	---	1	---	1/	---	100
2,000-7,999	80	5	10	2	1	2	1/	100
8,000 and over	85	2	5	5-	1	2	1/	100
Total	80	4	8	5	1	2	1/	100
Less than 1,000	88	2	1/	9	1	---	---	100
1,000-1,999	88	1/	4	6	2	1/	---	100
2,000-7,999	79	4	9	3	1	4	1/	100
8,000 and over	79	5	9	5	1	1	1/	100

1/ Less than 0.5 percent.

Feedlots with less than a capacity of 2,000 head of feed cattle had almost entirely English and English crossbreeds.

The 21 California feedlots concentrated on feeding English and English crossbreeds and some Okies, Brahma, and Brahma crossbreeds. The 13 large lots, particularly those in southern California, tended to feed Brahma and Brahma crossbreeds in the summer because of their heat tolerance. Colorado feedlots also tended to feed English and English crossbreeds; Okies were the second most popular breed. Most of the cattle fed in the western Corn Belt were English and English crossbreeds.

Such factors as operator's preference, efficiency and hardiness of breeds, seasonal and climatic factors, packer or buyer preferences, and availability of breeds were the important reasons given by operators in determining the breeds or crossbreeds which were fed.

There was considerable variation in the geographic origin of cattle placed on feed. Operators were asked to indicate the actual origin of the cattle (not necessarily the State or region in which the cattle were purchased). In some instances, the operators did not know the exact origin, but knew only the place purchased.

The largest proportion of cattle on feed in California were from Texas, but 31 percent were California cattle (table 8). The other States from which California obtained 5 or more percent of its cattle were Oregon, Alabama, and Louisiana. A relatively small proportion (2 percent) were imported from Mexico. Texas, Alabama, and Louisiana supplied a large proportion of the English cattle. The primary source of Brahma and Brahma crossbreeds was Texas, with about 21 percent of the total Brahma cattle coming from Mexico. The majority of the Okies fed in California were Texas cattle as were the dairy breeds and dairy crossbreeds. Texas was also the major supplier to California of Santa Gertrudis and Charolais and crossbreeds of these.

The majority of the cattle fed in Colorado (29 percent) were native cattle, although Texas supplied one-fourth of the cattle fed (table 9). Oklahoma, Kansas, and Wyoming were also major suppliers to the Colorado feedlots. The majority of the English cattle came from Colorado and Texas, and most of the Brahmas, Okies, Santa Gertrudis, Charolais, and crossbreeds came from Texas.

The largest proportion of the cattle fed in the western Corn Belt, 20 percent, were native cattle (table 10). South Dakota, Kansas, Oklahoma, and Texas were major suppliers for the western Corn Belt. Although 15 percent of the English cattle fed in the western Corn Belt were native cattle, South Dakota, Kansas, and Oklahoma supplied 11, 14, and 10 percent, respectively, of the English cattle fed. Brahma cattle were supplied by Texas primarily. Texas also provided 44 percent of the Okies, and Oklahoma, 37 percent. The majority of dairy cattle (58 percent) fed in the western Corn Belt were native cattle, and the majority of the Santa Gertrudis, Charolais, and crossbreeds of these--57 percent--were supplied by Kansas.

Each feeding region depended heavily on other States as a source of cattle. All feedlots relied on Texas for a relatively large number of cattle.

Table 8.--Percentage of total cattle fed, by breeds and crossbreeds, in California, by State or region of origin, July 1, 1966, to June 30, 1967

State or region of cattle origin	Breeds and crossbreeds fed in California 1/						
	English and English crossbreeds	Brahma and Brahma crossbreeds	Okies	Dairy breeds and dairy crossbreeds	Santa Gertrudis, Charolais, and crossbreeds	Mexican cattle	Total
California	27	---	---	1	2/	3	31
Texas	17	6	9	4	1	2/	37
Oregon	5	---	---	---	---	---	5
Alabama	7	---	---	---	---	---	7
Louisiana	7	---	---	---	---	---	7
Region 1 3/	2	1	3/	2/	2/	2/	3
Region 2 4/	5	---	3/	---	---	---	5
Region 3 5/	2/	---	2	---	---	2/	2
Mississippi	2/	2/	2/	2/	2/	2/	1
Minnesota	---	---	---	1	---	---	1
Imported 6/	---	1	---	---	---	1	2
Total	69	8	12	6	1	4	100

1/ Total number of cattle placed on feed in California was 201,312 head.
2/ Less than 0.5 percent.
3/ Includes Utah, Arizona, and New Mexico.
4/ Includes Idaho and Nevada.
5/ Includes Oklahoma, Kansas, and Wyoming.
6/ Includes Mexico only.

Table 9.--Percentage of total cattle fed, by breeds and crossbreeds in Colorado, by State or region of origin, July 1, 1966, to June 30, 1967

State or region of cattle origin	Breeds and crossbreeds fed in Colorado 1/							
	English and English crossbreeds	Brahma and Brahma crossbreeds	Okies	Dairy breeds and dairy crossbreeds	Santa Gertrudis, Charolais, and crossbreeds	Mexican cattle	Other	Total
Colorado	27	2/	2/	2	2/	---	---	29
Texas	19	2	2	2/	1	2/	2/	25
Kansas	8	---	2/	1	---	---	---	9
Oklahoma	7	2/	1	2/	---	---	2/	9
Wyoming	8	---	---	---	2/	---	---	8
New Mexico	6	2/	---	---	2/	---	---	6
Region 1 3/	4	---	---	---	---	---	---	4
Region 2 4/	6	2/	2/	---	---	2/	---	6
Region 3 5/	1	---	2	---	---	---	---	3
Imported 6/	---	---	---	---	---	1	---	1
Total	86	3	6	3	1	1	2/	100

1/ Total number of cattle placed on feed in Colorado was 328,864 head.
2/ Less than 0.5 percent.
3/ Includes Montana, S. Dakota, N. Dakota, and Nebraska.
4/ Includes Utah, Oregon, Idaho, Nevada, Arizona, and California.
5/ Includes Tennessee, Arkansas, and Mississippi.
6/ Includes Mexico only.

Table 10.--Percentage of total cattle fed, by breeds and crossbreeds in the western Corn Belt, by State or region of origin, July 1, 1966, to June 30, 1967

State or region of cattle origin	Breeds and crossbreeds fed in the western Corn Belt 1/					Total
	English and English crossbreeds	Brahma and Brahma crossbreeds	Okies	Dairy breed and dairy crossbreeds	Santa Gertrudis, Charolais, and crossbreeds	
	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	15	---	2/	4	2/	20
Kansas	14	---	1	2/	1	16
Oklahoma	10	---	3	---	---	13
Texas	8	1	3	2/	2/	12
South Dakota	11	---	2/	2/	2/	12
Montana	9	---	2/	2/	2/	9
Region 1 3/	9	---	---	1	2/	9
Region 2 4/	2	2/	2/	2/	2/	3
Region 3 5/	1	---	---	2/	---	1
Region 4 6/	3	---	---	1	---	4
Imported 7/	1	---	---	---	---	1
Total	83	1	7	7	2	100

1/ Total cattle placed on feed in the western Corn Belt was 145,615 head.
2/ Less than 0.5 percent.
3/ Includes New Mexico, Idaho, Utah, Colorado, and Wyoming.
4/ Includes Georgia, Louisiana, Alabama, Tennessee, Missouri, and Arkansas.
5/ Includes California and Oregon.
6/ Includes Wisconsin and North Dakota.
7/ Includes Canada only.

Considering the substantial growth in cattle feeding in the southwestern plains, it appears there may be a feeder cattle supply problem in other feeding regions in future years.

Placements by Sex

There were definite preferences by operators for sex of cattle fed. Operator choice was influenced by expected feed conversion efficiency, type of operation, facilities available, equipment, and packer-buyer preferences. Both preference and availability, of course, influenced choice of cattle purchased for feeding.

Of the 702,172 cattle placed on feed, 61 percent were steers and 39 percent were heifers (app. table 29). There was no apparent relationship between size of feedlot and sex of cattle fed. California feedlots fed a larger proportion

of steers than heifers. This is illustrated by that data that 173,446 head (87 percent) were steers out of the total 199,164 head fed.

Colorado operators tended to feed more heifers than steers. Fifty-seven percent of the cattle fed by Colorado feedlots were heifers. The feedlots with a capacity of less than 1,000, of 1,000 to 1,999, and of 8,000 and over fed more hiefers than steers. On the other hand, feedlots with a capacity of 2,000 to 7,999 fed more steers than heifers. According to reports by the Statistical Reporting Service of the Department of Agriculture, only 40 percent of all cattle on feed in Colorado during the study period were heifers.

More steers than heifers were fed in the western Corn Belt in feedlots of all sizes. The division between steers and heifers placed on feed throughout the region was approximately the same as that of the sample. 3/

Grades of Placements

To determine the quality of cattle placed on feed, feedlot operators were asked to indicate what proportion of the total cattle placed on feed were of specified grades. Very few cattle were U.S. graded, however, most operators indicated that they had estimated the grades of the cattle they purchased and placed on feed. In purchasing cattle, operators try to relate quality of feeder cattle to the quality of slaughter cattle they desire to sell. Undoubtedly the U.S. standards are used as guidelines in determining the grades of cattle placements but not in a strict sense.

Sixty-three percent of cattle placed on feed were estimated by feedlot operators as "choice" and one-third as "good" (table 11). There were differences among sizes of feedlots in grades of cattle fed. For feedlots with less than a capacity of 2,000, 47 percent of the cattle were termed "choice" by feedlot operators. For feedlots with a capacity of 2,000 and over, 68 percent were considered "choice." Large feedlots tended to place a relatively larger number of better quality cattle on feed than small lots did.

California feedlots tended to feed "choice" cattle but there were differences in size of lots and grades. The majority of cattle in the feedlots with a capacity of less than 1,000 were categorized by feedlot operators as "good" or lower quality. In the feedlots with a capacity of 2,000 and over, the majority of the cattle were rated by operators as "choice" when placed on feed.

The majority of cattle placed on feed by the Colorado operators were categorized as "choice," but a few were believed to have been as low as "standard." There were no apparent differences among the size of feedlots in the quality of cattle placed on feed in Colorado.

The majority of the cattle in the western Corn Belt were categorized as "good," and 43 percent as "choice." The feedlots with a capacity of less than

3/ According to the Statistical Reporting Service quarterly, "Cattle on Feed."

Table 11.--Number and percentage of cattle fed by grades at time placed on feed, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Grades of placements			
		Choice	Good	Standard	Total
	Number	Number	Number	Number	Number
Western Corn Belt	35	36,775	46,076	2,884	85,895
Less than 1,000	11	6,252	5,854	49	12,315
1,000-1,999	14	13,052	16,858	1,070	30,980
2,000-7,999	10	17,471	23,364	1,765	42,600
California	21	115,080	70,907	15,177	201,164
Less than 1,000	8	693	2,861	1,047	4,601
1,000-1,999	1	900	900	---	1,800
2,000-7,999	7	25,798	18,453	2,600	46,851
8,000 and over	5	87,689	48,693	11,530	147,912
Colorado	44	223,819	80,676	5,575	310,070
Less than 1,000	16	5,627	5,537	272	11,436
1,000-1,999	7	11,323	8,037	930	20,290
2,000-7,999	12	35,959	33,937	1,700	71,596
8,000 and over	9	170,910	33,165	2,673	206,748
Total	100	375,674	197,659	23,636	1/597,129
Less than 1,000	35	12,572	14,252	1,368	28,352
1,000-1,999	22	25,275	25,795	2,000	53,070
2,000-7,999	29	79,228	75,754	6,065	161,047
8,000 and over	14	258,599	81,858	14,203	354,660
		Percentage distribution			
		Percent	Percent	Percent	Percent
Western Corn Belt		43	54	3	100
Less than 1,000		51	48	1	100
1,000-1,999		42	54	4	100
2,000-7,999		41	55	4	100
California		57	35	8	100
Less than 1,000		15	62	23	100
1,000-1,999		50	50	---	100
2,000-7,999		55	39	6	100
8,000 and over		59	33	8	100
Colorado		72	26	2	100
Less than 1,000		49	48	3	100
1,000-1,999		56	40	4	100
2,000-7,999		50	48	2	100
8,000 and over		83	16	1	100
Total		63	33	4	100
Less than 1,000		45	50	5	100
1,000-1,999		48	48	4	100
2,000-7,999		49	47	4	100
8,000 and over		73	23	4	100

1/ This total includes 160 head of commercial cattle which were fed by the small feedlots in the western Corn Belt.

1,000 fed primarily "choice" cattle. According to feedlot operators, the feedlots with capacities of 1,000 to 1,999 and 2,000 to 7,999, fed primarily cattle of "good" grade.

Two relevant questions arise in consideration of differences among the regions and among the size categories in grades of placements. How important are the U.S. grades and standards in indicating quantity to the producer? What are the advantages of grades for the different regions and the different size categories? The U.S. grades were not used extensively, as is indicated by responses of feedlot operators to the question regarding quality. There appear to be some advantages of buying and feeding different grades of cattle in different regions and different-sized lots.

Weights of Placements

Variation in weights of placements is to be expected because of the many factors influencing the placement weight. Operator's preference is a strong factor in determining the beginning weights at which cattle are placed on feed. The type of operation (warmup or finishing) is another important factor in choice of placement weights.

The largest proportion of the cattle placed on feed from July 1, 1966, to June 30, 1967, in the lots surveyed weighed from 600 to 699 pounds (table 12). Forty-two percent of the cattle were in this weight category. Of the total 695,105 head placed on feed, 78 percent weighed between 500 and 799 pounds when placed on feed. Only 5 percent weighed more than 799 pounds, and 17 percent, less than 500 pounds.

Feeding and Marketing

Months Placed on Feed

To obtain information on the months cattle were placed on feed, feedlot operators were asked what proportion of the total cattle were placed in the feedlot in each of the 12 months for the study period.

These data indicate that for the total of the three feeding regions more cattle were placed on feed in September and October than in any of the other months (table 13). 4/ The lowest number, 6 percent, was placed on feed in January and the largest, 13 percent, in October.

One fact that the data in table 13 do not indicate is that large feedlots tend to place about the same proportion of cattle on feed each month, and small lots tend to place cattle on feed in only 1, 2, or 3 months during a 12-month period. When the operator of a large feedlot sells a lot of cattle, he replaces that lot with other feedlot cattle. Large feedlots are constantly buying and selling to maintain full or near capacity during a 12-month period. There are months within each 12-month period when the number on feed is below capacity. Such factors as weather and climatic conditions as well as market

4/ Data are in app. table 30.

Table 12.--Number and percentage of cattle fed, by weight ranges at time cattle were placed on feed, by geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Weight range of cattle placement						
		Under 400 lb.	400-499 lb.	500-599 lb.	600-699 lb.	700-799 lb.	800 lb. and over	Total cattle
	Number	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	88	5,729	28,581	20,679	52,431	36,988	28,490	172,898
Less than 1,000	46	509	3,549	1,209	9,383	5,153	4,615	24,318
1,000-1,999	25	5,320	14,360	4,210	21,285	6,685	12,620	64,480
2,000-7,999	17	---	10,672	15,260	21,763	25,150	11,255	84,100
California	21	16,006	36,858	54,797	71,826	6,765	4,561	190,813
Less than 1,000	8	---	550	300	260	160	3,330	4,600
1,000-1,999	1	---	---	---	1,800	---	---	1,800
2,000-7,999	7	---	---	2,250	31,700	2,175	375	36,500
8,000 and over	5	16,006	36,308	52,247	38,066	4,430	856	147,913
Colorado	45	11,560	20,638	59,947	169,618	66,319	3,312	331,394
Less than 1,000	16	2,067	2,901	1,715	2,493	1,600	509	11,285
1,000-1,999	7	520	1,120	2,250	12,125	3,703	572	20,290
2,000-7,999	12	3,800	8,869	19,688	20,251	18,567	420	71,595
8,000 and over	10	5,173	7,748	36,294	134,749	42,449	1,811	228,224
Total	154	33,295	86,077	135,423	293,875	110,072	36,363	695,105
Less than 1,000	70	2,476	7,000	3,224	12,136	6,913	8,454	40,203
1,000-1,999	33	5,840	15,480	6,460	35,210	10,388	13,192	86,570
2,000-7,999	36	3,800	19,541	37,198	73,714	45,892	12,050	192,195
8,000 and over	15	21,179	44,056	88,541	172,815	46,879	2,667	376,137
		Percentage distribution						
		Percent	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt		3	17	12	30	21	17	100
Less than 1,000		2	15	5	38	21	19	100
1,000-1,999		8	22	7	33	10	20	100
2,000-7,999		---	13	18	26	30	13	100
California		8	19	29	38	4	2	100
Less than 1,000		---	12	7	6	3	72	100
1,000-1,999		---	---	---	100	---	---	100
2,000-7,999		---	---	6	87	6	1	100
8,000 and over		11	24	35	26	3	1	100
Colorado		4	6	18	51	20	1	100
Less than 1,000		18	26	15	22	14	5	100
1,000-1,999		3	5	11	60	18	3	100
2,000-7,999		5	12	28	28	26	1	100
8,000 and over		2	3	16	59	19	1	100
Total		5	12	20	42	16	5	100
Less than 1,000		6	18	8	30	17	21	100
1,000-1,999		7	18	7	41	12	15	100
2,000-7,999		2	10	20	38	24	6	100
8,000 and over		6	12	23	46	12	1	100

Table 13.--Percentage distribution of cattle fed, by months of placements, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Months cattle placed on feed												
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Western Corn Belt	7	7	11	14	10	7	7	9	8	8	6	6	100
Less than 1,000	6	9	12	9	12	10	8	8	7	7	6	6	100
1,000-1,999	8	7	9	11	13	7	7	9	8	8	7	6	100
2,000-7,999	6	7	12	17	9	5	7	10	8	8	5	6	100
California	10	9	11	11	8	7	5	4	9	7	8	11	100
Less than 1,000	19	7	11	9	8	7	9	7	6	7	5	5	100
1,000-1,999	---	---	---	---	---	---	---	---	---	---	---	---	---
2,000-7,999	4	7	19	18	13	7	1	3	1	9	9	9	100
8,000 and over	11	10	9	10	7	7	5	4	11	6	8	12	100
Colorado	6	6	10	14	9	8	7	7	8	8	8	9	100
Less than 1,000	8	3	8	28	15	3	8	1	13	2	7	4	100
1,000-1,999	5	5	10	15	12	8	5	4	9	9	12	6	100
2,000-7,999	7	8	11	19	8	9	5	6	8	8	6+	5	100
8,000 and over	6	6	10	12	8	8	8	7	8	9	8	10	100
Total	7	7	11	13	9	7	6	7	8	8	8	9	100
Less than 1,000	8	8	11	13	12	8	8	6	8	6	6	6	100
1,000-1,999	7	6	9	12	13	8	6	7	9	8	9	6	100
2,000-7,999	6	7	13	18	9	7	6	7	7	8	6	6	100
8,000 and over	8	7	10	11	8	7	7	6	9	8	8	11	100

factors influence this lag period. Feedlots of small capacity, on the other hand, often have periods when they are empty. This excess capacity is associated with weather, climate, and the market, but is also related to the principal business of the owners. Small feedlots, integrated with general farming, usually function around the major enterprises of the farming operation. Thus, cattle are placed on feed in months or periods when the major farm enterprises lag.

Length of Time on Feed

The majority of cattle placed on feed, 45 percent, were fed from 120 to 149 days (table 14). Only a relative few, 5 percent, were fed less than 90 days, and 8 percent were fed 180 or more days. More than four-fifths, 87 percent, were fed from 90 to 179 days.

In California, 56 percent of the cattle were fed 120 days or more and 44 percent were fed less than 120 days. In Colorado, 80 percent were fed 120 days or more and only 20 percent were on feed less than 120 days. The proportion fed 120 days or more was largest in the western Corn Belt. In this region, 83 percent were in feedlots 120 or more days and only 17 percent were fed less than 120 days.

Death Loss and Marketing Loss

"Death loss" refers to loss of cattle while they are on feed in a feedlot and includes loss by diseases, accidents, or related factors. "Marketing loss" refers to loss of cattle by death from the time the cattle leave the feedlot until they arrive at the market or slaughtering plant. The marketing loss does not include loss of cattle which were not owned by the feedlot and does not include condemned cattle.

The largest number lost from the time cattle were placed in the feedlot until they were sold was incurred by large Colorado feedlots (app. table 31). The western Corn Belt lost a greater percentage of cattle during the marketing process than any other region. Losses during marketing were usually negligible. Although the cause of death varied considerably, the major cause of loss in the large Colorado feedlots (and in Colorado in general) was due to calving problems. As indicated previously, Colorado feeds a relatively larger proportion of heifers than the other regions (app. table 29).

The death loss of the large Colorado feedlots sampled was only 0.7 percent of the cattle placed on feed. The death loss for all Colorado feedlots sampled was only 0.6 percent. The western Corn Belt had the largest loss, with a combined death and marketing loss of 0.7 percent of the cattle placed on feed. Death losses varied from none to a high of 1.4 percent.

Ownership of Cattle

The ownership of cattle was divided into two major categories--those owned and those owned by others. This type of breakdown gives some indication of the operating capital which feedlots need. The second category gives some

Table 14.--Number and percentage of cattle fed by length of time on feed for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Days on feed					
		Under 90 days	90-119 days	120-149 days	150-179 days	180 days and over	Total
	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	85	385	25,294	60,637	35,450	27,992	149,758
Less than 1,000	42	385	3,610	10,713	3,882	4,788	23,378
1,000-1,999	24	---	7,844	15,623	5,808	13,005	42,280
2,000-7,999	18	---	13,840	34,301	25,760	10,199	84,100
California	21	17,516	69,610	93,180	14,569	6,290	201,165
Less than 1,000	8	3,330	735	73	163	300	4,601
1,000-1,999	1	---	---	90	1,620	90	1,800
2,000-7,999	7	7,300	17,998	19,553	---	2,000	46,851
8,000 and over	5	6,886	50,877	73,464	12,786	3,900	147,913
Colorado	45	14,220	52,868	151,903	87,510	22,158	328,664
Less than 1,000	16	835	1,886	1,019	4,183	3,081	11,004
1,000-1,999	7	900	3,795	8,832	1,880	2,435	17,842
2,000-7,999	12	---	2,350	40,466	13,511	15,268	71,595
8,000 and over	10	12,485	44,837	101,591	67,936	1,374	228,223
Total	151	32,121	147,772	305,725	137,529	56,440	679,587
Less than 1,000	67	4,550	6,231	11,805	8,228	8,169	38,983
1,000-1,999	32	900	11,639	24,545	9,308	15,530	61,922
2,000-7,999	37	7,300	34,188	94,320	39,271	27,467	202,546
8,000 and over	15	19,371	95,714	175,055	80,722	5,274	376,136
		Percentage distribution					
		Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt		1/	17	40	24	19	100
Less than 1,000		2	15	46	17	20	100
1,000-1,999		---	18	37	14	31	100
2,000-7,999		---	16	41	31	12	100
California		9	35	46	7	3	100
Less than 1,000		72	16	2	4	6	100
1,000-1,999		---	---	5	90	5	100
2,000-7,999		16	38	42	---	4	100
8,000 and over		5	34	50	9	2	100
Colorado		4	16	46	27	7	100
Less than 1,000		8	17	9	38	28	100
1,000-1,999		5	21	50	10	14	100
2,000-7,999		---	3	57	19	21	100
8,000 and over		5	20	44	30	1	100
Total		5	22	45	20	8	100
Less than 1,000		12	16	30	21	21	100
1,000-1,999		1	19	40	15	25	100
2,000-7,999		4	17	47	19	13	100
8,000 and over		5	26	47	21	1	100

1/ Less than 0.5 percent.

indication of the vertical integration which may be present.

The majority of cattle fed from July 1, 1966, to June 30, 1967 (69 percent) were owned or financed by feedlot owners (table 15). The largest volume not owned or financed by the feedlot or its members belonged to ranchers. Of the total 721,112 head reported fed, 6 percent belonged to packers and 11 percent were owned or financed by others.

The majority of the cattle were owned by feedlots in each region. In California, 34 percent were owned or financed by the feedlot owners. Colorado feedlots had 84 percent of their cattle on feed owned or financed by the feedlots, and the feedlots in the western Corn Belt owned or financed 92 percent of the cattle fed.

Custom Feeding

Custom feeding has stimulated the growth of cattle feeding. A feeding operation of this nature allows individuals to place cattle on feed without purchasing the equipment, facilities, and land necessary to feed and also allows feedlots to feed without purchasing cattle. The types of arrangements between customers and feedlots vary and in some cases become quite complex, but apparently there are advantages to both parties involved.

Of the 148 operators who responded concerning custom feeding operations, 89 percent indicated they did not custom feed and 11 percent indicated they did so to some degree (app. table 32). Custom feeding is almost entirely restricted to feedlots with a capacity of 2,000 or more. Custom feeding was relatively more important in California and Colorado than in the western Corn Belt. Approximately 27 percent of the feedlots in California and about 18 percent of the Colorado feedlots did custom feeding. Only 4 percent of the western Corn Belt feedlots did custom feeding. The importance of custom feeding was also different for feedlots of different capacities. All feedlots with a capacity of 8,000 and over in California did some custom feeding. Forty percent of the large lots in Colorado custom fed.

Of the 17 feedlots in the study area which custom fed, six indicated that the feedlot financed the purchase or a proportion of the purchase of custom cattle. The remaining 11 operators indicated the feedlot did not finance purchases of custom cattle.

In nine of the 17 custom feedlots, the operators indicated they made the selling decisions. Eight operators indicated that the customers made the selling decisions of custom cattle.

The number of custom feedlots was a relatively small proportion of the total, but the number of cattle fed by custom feedlots was large. This can be attributed to the large feedlots which tended to be custom feeding operations.

Table 15.--Number and percentage of cattle fed, by ownership of cattle on feed, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Ownership of cattle on feed					Total
		Feedlots owned or financed		Feedlots not owned or financed			
		Feedlot	Members of feedlot	Packer	Rancher	Other 1/	
	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	90	136,578	2,680	11,800	900	---	151,958
Less than 1,000	47	24,728	---	---	---	---	24,728
1,000-1,999	25	45,400	880	---	---	---	46,280
2,000-7,999	18	66,450	1,800	11,800	900	---	80,950
California	21	68,224	12,000	27,980	72,656	58,026	238,686
Less than 1,000	8	4,600	---	---	---	---	4,600
1,000-1,999	1	1,800	---	---	---	---	1,800
2,000-7,999	7	19,886	7,500	14,700	2,350	4,200	48,636
8,000 and over	5	41,738	4,500	13,280	70,306	53,826	183,650
Colorado	45	269,247	5,239	2,857	28,444	24,481	330,268
Less than 1,000	16	11,435	---	---	---	---	11,435
1,000-1,999	7	17,790	---	---	2,500	---	20,290
2,000-7,999	12	56,829	5,239	---	7,239	2,286	71,593
8,000 and over	10	183,193	---	2,857	18,705	22,195	226,950
Total	156	474,049	19,919	42,637	102,000	82,507	720,912
Less than 1,000	71	40,763	---	---	---	---	40,763
1,000-1,999	33	65,190	880	---	2,500	---	68,570
2,000-7,999	37	143,165	14,539	26,500	10,489	6,486	201,179
8,000 and over	15	224,931	4,500	16,137	89,011	76,021	410,600
	Percentage distribution						
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt	90	2	8	2/	---	100	
Less than 1,000	100	---	---	---	---	100	
1,000-1,999	98	2	---	---	---	100	
2,000-7,999	82	2	15	1	---	100	
California	29	5	12	30	24	100	
Less than 1,000	100	---	---	---	---	100	
1,000-1,999	100	---	---	---	---	100	
2,000-7,999	41	15	30	5	9	100	
8,000 and over	23	2	7	38	30	100	
Colorado	82	2	2/	9	7	100	
Less than 1,000	100	---	---	---	---	100	
1,000-1,999	88	---	---	12	---	100	
2,000-7,999	80	7	---	10	3	100	
8,000 and over	81	---	1	8	10	100	
Total	66	3	6	14	11	100	
Less than 1,000	100	---	---	---	---	100	
1,000-1,999	95	1	---	4	---	100	
2,000-7,999	71	7	13	5	4	100	
8,000 and over	55	1	4	22	18	100	

1/ Includes retailers, etc.
2/ Less than 0.5 percent.

Grades Marketed

Feedlot operators ordinarily did not know the U.S. grades of cattle they sold. On occasion, the feedlot operator was informed by the purchaser as to the grade, but normally there was no announcement of grades to the feedlot operator. Grades of cattle given in table 16 are the grades which operators thought cattle were given when sold.

Eighty-one percent of cattle marketed were believed by feedlot operators to have been of choice grade (table 16). Of the remaining cattle, 13 percent were rated by operators as "good," 3 percent as "prime," and 3 percent as "standard." Operators rated no cattle lower than standard grade.

The grades for the California feedlots were designated by operators as "choice" and "good," the majority as "choice." One percent were designated "prime," and 8 percent, "standard."

The majority of cattle marketed by Colorado feedlots were designated by operators as "choice," 8 percent, "good," 4 percent, "prime," and 1 percent, "standard." In each capacity category, the majority were designated "choice," and the smallest proportion, "standard."

The majority of cattle marketed by the western Corn Belt were designated by operators as "choice" and the second largest proportion as "good." The number designated "prime" was greater than that designated "standard." Each of the size categories apparently marketed more choice than any other grade.

In the study area, 4 percent of the cattle marketed for the lots with a capacity of less than 1,000 and 3 percent for the lots with a capacity of 2,000 to 7,999 were designated "prime."

Weights Marketed

Marketing weight of feedlot cattle has been the subject of considerable attention. Some individuals feel that marketing lighter weight cattle would improve market price. Cost increases rapidly when cattle are fed beyond 1,000 pounds. Although these factors indicate that cattle should be marketed at lighter weights, other factors must be considered. Probably most important are buyer preferences.

Of the total cattle marketed from July 1, 1966, to June 30, 1967, 37 percent weighed 900 to 999 pounds. Thirty percent weighed 1,000 to 1,099 pounds, and 23 percent weighed 1,100 to 1,199 pounds (table 17). Only 4 percent weighed less than 900 pounds, and 6 percent weighed 1,200 pounds or more.

Large lots market lighter cattle than small lots. Of the cattle marketed by feedlots with a capacity of 8,000 or more, 48 percent weighed less than 1,000 pounds. Feedlots with a capacity of less than 1,000 marketed 24 percent of their cattle at less than 1,000 pounds. The same percentage relationship is present for various weights marketed by feedlots of other sizes. Only 2 percent of the cattle marketed by feedlots of 8,000 or more capacity weighed

Table 16.--Number and percentage of cattle marketed by market grades for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Grades of cattle marketed				
		Prime	Choice	Good	Standard	Total
	Number	Number	Number	Number	Number	Number
Western Corn Belt	76	3,115	118,714	12,555	205	134,589
Less than 1,000	37	830	18,762	1,143	5	20,740
1,000-1,999	23	354	38,063	5,332	200	43,949
2,000-7,999	16	1,931	61,889	6,080	---	69,900
California	21	2,399	115,798	42,463	13,041	173,701
Less than 1,000	8	---	950	2,534	1,116	4,600
1,000-1,999	1	---	875	700	175	1,750
2,000-7,999	7	224	29,198	16,579	850	46,851
8,000 and over	5	2,175	84,775	22,650	10,900	120,500
Colorado	45	12,791	251,861	23,580	3,499	291,731
Less than 1,000	16	626	7,719	1,251	15	9,611
1,000-1,999	7	1,584	15,373	1,848	---	18,805
2,000-7,999	12	3,968	49,099	3,568	---	56,635
8,000 and over	10	6,613	179,670	16,913	3,484	206,680
Total	142	18,305	486,373	78,598	16,745	600,021
Less than 1,000	61	1,456	27,431	4,928	1,136	34,951
1,000-1,999	31	1,938	54,311	7,880	375	64,504
2,000-7,999	35	6,123	140,186	26,227	850	173,386
8,000 and over	15	8,788	264,445	39,563	14,384	327,180
	Percentage distribution					
	Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt		3	88	9	1/	100
Less than 1,000		4	90	6	1/	100
1,000-1,999		1/	88	12	1/	100
2,000-7,999		3	89	8	---	100
California		1	67	24	8	100
Less than 1,000		---	21	55	24	100
1,000-1,999		---	50	40	10	100
2,000-7,999		1/	63	35	2	100
8,000 and over		2	70	19	9	100
Colorado		4	87	8	1	100
Less than 1,000		7	80	13	1/	100
1,000-1,999		8	82	10	---	100
2,000-7,999		7	87	6	---	100
8,000 and over		3	87	8	2	100
Total		3	81	13	3	100
Less than 1,000		4	79	14	3	100
1,000-1,999		4	84	12	1/	100
2,000-7,999		4	81	15	1/	100
8,000 and over		3	81	12	4	100

1/ Less than 0.5 percent.

Table 17.--Number and percentage of cattle marketed by weight categories, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Weight ranges of cattle marketed by pounds: Less 900	900-999	1,000-1,099	1,100-1,199	1,200 and more	Total
	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	87	1,206	25,985	47,106	54,070	29,591	157,958
Less than 1,000	45	466	2,567	7,496	9,810	11,981	32,348
1,000-1,999	24	140	8,918	10,930	17,855	3,705	41,548
2,000-7,999	18	600	14,500	28,680	26,405	12,915	83,100
California	21	13,910	53,256	96,585	8,448	1,500	173,699
Less than 1,000	8	700	16	3,530	353	---	4,599
1,000-1,999	1	---	875	875	---	---	1,750
2,000-7,999	7	4,310	23,265	16,790	2,485	---	46,850
8,000 and over	5	8,900	29,100	75,390	5,610	1,500	120,500
Colorado	44	11,630	161,267	48,944	88,956	8,620	319,417
Less than 1,000	16	4,415	3,741	1,316	1,647	281	11,400
1,000-1,999	7	743	8,125	4,560	5,921	623	19,972
2,000-7,999	11	1,199	22,842	15,421	17,220	3,935	60,617
8,000 and over	10	5,273	126,559	27,647	64,168	3,781	227,428
Total	152	26,746	240,508	192,635	151,474	39,711	650,084
Less than 1,000	69	5,581	6,324	12,342	11,810	13,252	49,317
1,000-1,999	32	883	17,918	16,365	23,776	4,328	63,270
2,000-7,999	36	6,109	60,607	60,891	46,110	16,850	190,567
8,000 and over	15	14,173	155,659	103,037	69,778	5,281	347,928
	Percentage distribution						
		Percent	Percent	Percent	Percent	Percent	Percent
Western Corn Belt		1/	17	30	34	19	100
Less than 1,000		1	8	22	29	40	100
1,000-1,999		1/	22	26	43	9	100
2,000-7,999		1/	17	35	32	16	100
California		8	31	56	5	1/	100
Less than 1,000		15	1/	77	8	---	100
1,000-1,999		---	50	50	---	---	100
2,000-7,999		9	50	36	5	---	100
8,000 and over		7	24	63	5	1	100
Colorado		4	50	15	28	3	100
Less than 1,000		39	33	12	14	2	100
1,000-1,999		4	40	23	30	3	100
2,000-7,999		2	38	25	28	7	100
8,000 and over		2	56	12	28	2	100
Total		4	37	30	23	6	100
Less than 1,000		11	13	25	24	27	100
1,000-1,999		1	28	26	38	7	100
2,000-7,999		3	32	32	24	9	100
8,000 and over		4	44	30	20	2	100

1/ Less than 0.5 percent.

1,200 pounds or more. In the feedlots with a capacity of less than 1,000 head 6 percent weighed 1,200 pounds or more. In California, the majority of cattle weighed 1,000 to 1,099 pounds; 39 percent weighed less than 1,000 pounds, and 5 percent weighed more than 1,099 pounds.

Of the cattle marketed by Colorado feedlots, the majority weighed 900 to 999 pounds. In Colorado, 15 percent weighed 1,000 to 1,099 pounds, 54 percent weighed less than 1,000 pounds, and 31 percent weighed more than 1,099 pounds.

In the western Corn Belt, more cattle were marketed in the 1,100- to 1,199-pound category than in any other weight category. The western Corn Belt marketed 30 percent weighing 1,000 to 1,099 pounds, 17 percent weighing less than 1,000 pounds, and 53 percent weighing more than 1,099 pounds.

Selling Agencies

The market agencies for cattle have changed considerably since World War II. Direct marketing, either by the feedlot operator or salaried salesmen, has increased in importance.

Sixty-four percent of the cattle marketed were sold by owners (table 18). Feedlots hired salaried salesmen to sell 14 percent of the cattle, and 22 percent were sold by other agencies.

In California, more cattle were sold by the owners than by any type of selling agency. Salaried salesmen and other agencies sold 29 and 32 percent, respectively. The lots with a capacity of 8,000 and over marketed 40 percent through other agencies, and salaried salesmen sold 40 percent of the cattle from feedlots of this size.

Owners of the cattle marketed by Colorado feedlots were the selling agents for 69 percent of the cattle. Salaried salesmen sold 13 percent, and other agencies sold 18 percent. For the three categories of feedlots with a capacity of 1,000 or more, cattle owners were the most important selling agents. The lots with a capacity of 1,000 to 1,999 and 2,000 to 7,999 marketed the second largest volume through salaried salesmen, but those with a capacity of 8,000 and over depended more on other agencies.

Owners were the major selling agencies for the western Corn Belt feedlots. Eighty-one percent of the cattle were sold by owners. Nineteen percent were sold by other agencies, and no cattle were sold by salaried salesmen.

Selling Arrangements

Traditionally, cattle have been marketed on a direct live weight basis, but in recent years they have been marketed more often by grade and carcass weight, carcass weight, or by consignment arrangements.

Seventy-six percent of the cattle in the study area were marketed on a direct basis by live weight (table 19). Grade and carcass weight arrangements

Table 18.--Number and percentage of cattle marketed by selling agency, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Selling agency of feedlot cattle			
		Owner	Salaried Salesman	Other	Total
	Number	Number	Number	Number	Number
Western Corn Belt	89	123,793	---	29,680	153,473
Less than 1,000	46	12,173	---	12,050	24,223
1,000-1,999	25	32,755	---	13,395	46,150
2,000-7,999	18	78,865	---	4,235	83,100
California	18	62,655	47,625	51,170	161,450
Less than 1,000	7	1,180	---	420	1,600
1,000-1,999	0	---	---	---	---
2,000-7,999	6	37,350	---	2,000	39,350
8,000 and over	5	24,125	47,625	48,750	120,500
Colorado	46	221,044	42,804	56,404	320,252
Less than 1,000	16	2,051	3,684	3,878	9,613
1,000-1,999	7	9,500	5,781	4,450	19,731
2,000-7,999	12	40,162	11,980	10,475	62,617
8,000 and over	10	169,331	21,359	37,601	228,291
Total	152	407,492	90,429	137,254	635,175
Less than 1,000	69	15,404	3,684	16,348	35,436
1,000-1,999	32	42,255	5,781	17,845	65,881
2,000-7,999	36	156,377	11,980	16,710	185,067
8,000 and over	15	193,456	68,984	86,351	348,791
		Percentage distribution			
		Percent	Percent	Percent	Percent
Western Corn Belt		81	---	19	100
Less than 1,000		50	---	50	100
1,000-1,999		71	---	29	100
2,000-7,999		95	---	5	100
California		39	29	32	100
Less than 1,000		74	---	26	100
1,000-1,999		---	---	---	---
2,000-7,999		95	---	5	100
8,000 and over		20	40	40	100
Colorado		69	13	18	100
Less than 1,000		22	38	40	100
1,000-1,999		48	29	23	100
2,000-7,999		64	19	17	100
8,000 and over		74	9	17	100
Total		64	14	22	100
Less than 1,000		44	10	46	100
1,000-1,999		64	9	27	100
2,000-7,999		85	6	9	100
8,000 and over		55	20	25	100

Table 19.--Number and percentage of cattle marketed by type of selling arrangement, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Type of selling arrangements			
		Direct, live weight	Grade and carcass weight	Other	Total
	Number	Number	Number	Number	Number
Western Corn Belt	86	102,564	19,315	20,871	142,750
Less than 1,000	44	19,699	650	3,151	23,500
1,000-1,999	25	35,365	4,750	6,035	46,150
2,000-7,999	17	47,500	13,915	11,685	73,100
California	19	151,125	17,625	1,893	170,643
Less than 1,000	6	1,170	---	393	1,564
1,000-1,999	1	1,750	---	---	1,750
2,000-7,999	7	29,330	17,500	---	46,830
8,000 and over	5	118,875	125	1,500	120,500
Colorado	44	203,384	81,139	2,708	287,231
Less than 1,000	16	8,680	205	728	9,613
1,000-1,999	7	16,904	2,026	800	19,730
2,000-7,999	12	60,212	1,205	1,180	62,597
8,000 and over	9	117,588	77,703	---	195,291
Total	149	457,073	118,079	25,472	600,624
Less than 1,000	66	29,549	855	4,272	34,676
1,000-1,999	33	54,019	6,776	6,835	67,630
2,000-7,999	36	137,042	32,620	12,865	182,527
8,000 and over	14	236,463	77,828	1,500	315,791
		Percentage distribution			
		Percent	Percent	Percent	Percent
Western Corn Belt		72	14	14	100
Less than 1,000		84	3	13	100
1,000-1,999		77	10	13	100
2,000-7,999		65	19	16	100
8,000 and over					
California		89	10	1	100
Less than 1,000		75	---	25	100
1,000-1,999		100	---	---	100
2,000-7,999		63	37	---	100
8,000 and over		99	1/	1	100
Colorado		71	28	1	100
Less than 1,000		90	2	8	100
1,000-1,999		86	10	4	100
2,000-7,999		96	2	2	100
8,000 and over		60	40	---	100
Total		76	20	4	100
Less than 1,000		85	2	13	100
1,000-1,999		80	10	10	100
2,000-7,999		75	18	7	100
8,000 and over		75	25	1/	100

1/ Less than 0.5 percent.

accounted for 20 percent of the cattle sold. Only 4 percent were sold under other arrangements, including sales through terminals.

For each region, the majority of cattle were marketed on a direct live weight basis. Feedlot categories in each region marketed more cattle on a direct live weight basis than by any other type arrangement.

In all cases, there was shrinkage assessment of the cattle marketed on a direct live weight basis except for custom cattle where transfer of ownership did not take place. The shrinkage assessment was 4 percent for the western Corn Belt and Colorado in most cases. The shrinkage assessment in California was 5 percent during most of the data period, from July 1, 1966, to April 30, 1967, but was reduced to 4 percent on May 1, 1967.

One problem which feedlots had in marketing on a direct live weight basis concerns the length of time cattle were sold prior to shipment. This problem arises when cattle are sold, but buyers do not transfer the cattle within the agreed time. The price of cattle is determined on the date of sale and an arrangement of shipment data is also determined at the sales date. If cattle buyers do not ship cattle on the agreed date, the feedlot continues to feed the cattle at no extra cost until the shipment is made. Feedlot operations incur additional cost, and buyers receive heavier cattle at the feedlot's expense. This problem was evident in Colorado where no special arrangements were present if packers did not ship or would not allow feedlots to ship cattle on the agreed date. In California, the arrangements provide for the feedlot operator to weigh cattle on the agreed upon date of shipment and charge the buyer for cost incurred by the feedlot if cattle are not shipped or delivered on this date. In all cases in California, cattle which were sold on a direct live weight basis were shipped within 10 days or less from the date of sale. But in the western Corn Belt and Colorado there were several instances where cattle were shipped 10 or more days after sale and after the agreed date of shipment.

Geographic Area of Sales Outlet

The majority of cattle in each region were marketed in the same region in which the feedlots were located. All feedlots in California marketed all cattle within the State. In Colorado, there were some different geographic sales outlets, but the majority were marketed in the State. The western Corn Belt feedlots marketed the majority of their cattle in the western Corn Belt. A small number of cattle were marketed outside the region for each capacity category.

Operating Example

To obtain a better perspective of feedlots in each region, data were collected for a single lot of cattle placed on feed after July 1, 1966. In most cases, data were for cattle placed on feed in the third quarter of 1966 (October, November, or December) but there were instances where feedlots did not place cattle on feed during this period. In these instances, data were collected for cattle placed on feed as near as possible to the third quarter of 1966.

Data were then placed in three categories according to feedlot capacity (table 20). Statistics were computed for the specific lots without regard to sex of cattle. Data were then segmented and statistics computed for the same lots but with consideration given to sex of cattle. Several difficulties arise in interpreting data on these selected lots because there are few definite patterns. Only very general statements can be made about characteristics of the specific lots in making comparisons. Inasmuch as all data represent selected lots, no inferences are possible for the population of lots in each region. Comparisons are valid only for the sample reported there.

All size categories in the western Corn Belt tended to keep cattle on feed for a longer period than in the other regions. California feedlots tended to start feeding cattle with a higher average weight than the other regions. There was no definite pattern established between average marketing weight and average pounds gained, but California tended to market light cattle with low daily gains. For feedlots with a capacity of less than 2,000, average gain per day tended to be higher in Colorado than in California and the western Corn Belt. The average daily gain was higher in the western Corn Belt for the lots with a capacity of 2,000 to 7,999. The highest average daily gain was in California for the lots with a capacity of 8,000 and over.

The differential in price (average out-price minus average in-price) did not develop any definite patterns. This differential is presented because the relative price paid for feeders and obtained for finished animals has an influence on the profit level. A negative value means the feeding operation must be profitable enough to absorb the loss incurred from the original purchase weight. A positive differential means a gain has been received on the pounds purchased.

In all cases, the average daily gain of steers was larger than the average daily gain of heifers. In most cases, the average in-price of steers was higher than the average in-price of heifers. The out-price of steers was not always larger than the out-price of heifers.

Although no definite relationship existed among regions, within regions, or among capacity groups, some characteristics of the feeding operations developed. It was indicated that most cattle were on feed for more than 120 days, weighed more than 600 pounds when placed on feed, and weighed more than 1,000 pounds when marketed. Daily gain was generally greater than 2.5 pounds. Price differentials were negative about 50 percent of the time.

In a comparison of data concerning steers and heifers--(1) steers were usually on feed longer than heifers in California and Colorado, and heifers were usually on feed longer than steers in the western Corn Belt, (2) the in-weights of steers tended to be higher than in-weights of heifers, (3) the out-weights of steers tended to be higher than out-weights of heifers, (4) the average weight gain and the average daily gain tended to be higher for steers than for heifers, (5) the average in-price and average out-price for steers tended to be higher than the corresponding prices for heifers, and (6) negative price differential occurred more frequently with steers than with heifers.

Table 20.--Data on specific lots of cattle placed on feed in the third quarter of 1966, for geographic regions and feedlot capacity size categories 1/

Geographic region and feedlot capacity size category	Feedlots responding	Specific lots of total cattle								
		Average in lot	Average time on feed	Average in-weight	Average out-weight	Average gained	Average gained per day	Average in-price	Average out-price	Average out-price minus average in-price
	Number	Number	Days	Pounds	Pounds	Pounds	Pounds	Dol. per cwt.	Dol. per cwt.	Dol. per cwt.
Western Corn Belt	71									
Less than 1,000	44	111	167	658	1088	403	2.41	25.09	24.90	- .19
1,000-1,999....	19	192	173	600	1047	447	2.58	24.88	25.11	.23
2,000-7,999....	8	423	160	662	1130	468	2.93	25.75	25.77	.02
California	17									
Less than 1,000	7	170	133	671	967	296	2.23	25.23	24.17	-1.06
1,000-1,999....	1	50	60	850	990	140	2.33	22.60	25.80	3.20
2,000-7,999....	5	155	134	634	1009	375	2.79	24.63	24.75	.12
8,000 and over.	4	227	128	706	1031	325	2.54	24.63	24.57	- .06
Colorado	35									
Less than 1,000	11	189	163	569	1027	458	2.81	24.71	24.45	- .26
1,000-1,999....	6	326	149	622	1057	435	2.92	25.78	24.69	-1.09
2,000-7,999....	9	265	156	598	1035	437	2.80	25.18	25.34	.16
8,000 and over.	9	289	146	662	1017	355	2.43	24.01	23.61	- .40

Table 20.--Data on specific lots of cattle placed on feed in the third quarter of 1966, for geographic regions and feedlot capacity size categories 1/--Continued

Geographic region and feedlot capacity size category	Average in lot	Average time on feed	Average in-weight	Average out-weight	Average gained	Average gained per day	Average in-price	Average out-price	Average out-price minus average in-price
	Steers								
	Number	Days	Pounds	Pounds	Pounds	Pounds	Dol. per cwt.	Dol. per cwt.	Dol. per cwt.
Western Corn Belt									
Less than 1,000	87	164	724	1191	467	2.85	25.12	24.80	- .23
1,000-1,999	193	134	663	1169	506	3.78	26.75	24.58	-2.17
2,000-7,999	423	160	662	1130	468	2.93	25.75	25.77	.02
California									
Less than 1,000	149	137	710	1030	320	2.34	25.08	24.20	- .88
1,000-1,999 2/	50	60	850	990	140	2.33	22.60	25.80	3.20
2,000-7,999	86	138	628	1038	410	2.97	25.50	25.33	- .17
8,000 and over	227	128	706	1031	325	2.54	24.63	24.57	- .06
Colorado									
Less than 1,000	123	161	586	1059	473	2.94	25.66	24.47	-1.19
1,000-1,999	295	156	672	1129	457	2.93	25.63	24.43	-1.20
2,000-7,999	287	160	593	1137	544	3.40	25.78	25.56	- .22
8,000 and over	477	144	715	1147	432	3.00	24.96	23.78	-1.18
	Heifers								
Western Corn Belt									
Less than 1,000	142	172	570	951	381	2.22	25.05	24.93	- .12
1,000-1,999	192	187	577	1001	424	2.27	24.05	25.31	1.26
2,000-7,999 3/									
California									
Less than 1,000	275	110	475	650	175	1.59	26.00	24.00	-2.00
1,000-1,999 2/ 3/									
2,000-7,999	360	120	650	925	275	2.29	22.00	23.00	1.00
8,000 and over 3/									
Colorado									
Less than 1,000	256	166	551	996	445	2.68	23.76	24.43	.67
1,000-1,999	372	140	548	948	400	2.86	26.00	25.08	- .92
2,000-7,999	238	150	603	907	304	2.03	25.78	25.56	- .22
8,000 and over	194	148	636	952	316	2.14	23.53	23.53	.00

1/ Third quarter is October, November, and December.
2/ Only one feedlot operator in this category gave data required.
3/ Data on specific lots for this size category was for steers only.

Rations

The small lots in each region tended to produce their own grains and roughages but purchased supplements. The large lots purchased most of their feed inputs.

In California, the two major grains fed were barley and milo, with some feedlots feeding corn. The primary roughage was alfalfa cubes but straw (barley mostly), hay, and crop residues (carrots, potatoes, and cantaloupes) were also fed.

The two major grains fed in Colorado were corn and milo; some barley was fed. The most common roughage fed in the Colorado feedlots was corn silage. Some hays (legumes primarily), beet pulp (primarily dry), and hay silage were also fed.

Corn was the major grain fed by feedlots in the western Corn Belt. Other grains such as barley and milo were fed but in limited quantity. The roughages commonly fed in this region were corn silage, hay silage, and hay; most of the feeding was corn silage.

Operators were asked to indicate the volume and cost of the ingredients fed during the 12-month period. The responses were adjusted to tons of feed fed and cost per ton for each feedlot. The average volume and average cost of inputs were computed for each feedlot size category (table 21). The average number of cattle placed on feed for each feedlot size category was also computed.

The most apparent difference within a feeding region in cost per ton of inputs was in California. The difference in the cost of supplement for small and large lots was considerable. This difference can be explained partially by the quality of protein supplement and by the rations fed.

The differences in the cost among regions are due partially to differences in the grains, supplements, and roughages fed. Other factors are transportation, handling, and milling costs.

Source of Capital

Differences in policies of lending agencies and interest cost in the three feeding regions may be related to differences in the size of feedlots.

The majority of the feedlots, 84 percent, indicated they obtained their capital for fixed investments from commercial banks (app. table 33). One-tenth of the operators indicated they depended on other sources, and only 6 percent indicated they obtained capital from production credit associations. The same source of capital for fixed investment (commercial banks) was used by the majority of the feedlots.

Table 21.--Average number of cattle placed on feed, average volume and average cost of grain, supplement, and roughage for feedlots, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Average number of cattle placed on feed	Grain		Supplement		Roughage	
			Average volume for feedlots	Average cost for feedlots	Average volume for feedlots	Average cost for feedlots	Average volume for feedlots	Average cost for feedlots
	Number	Number	Tons	Dollars per ton	Tons	Dollars per ton	Tons	Dollars per ton
Western Corn Belt	80							
Less than 1,000	48	524	233	44.43	41	101.25	233	22.75
1,000-1,999	19	1,851	1,937	44.45	147	94.65	1,396	21.00
2,000-7,999	13	4,672	5,670	44.30	379	86.90	4,211	20.75
California	19							
Less than 1,000	7	767	168	49.25	36	92.00	323	29.00
1,000-1,999	2	900	1,500	50.00	52	100.00	350	29.00
2,000-7,999	5	6,693	2,549	48.60	350	55.00	8,010	29.00
8,000 and over	5	29,582	17,000	52.40	4,346	52.25	4,135	31.00
Colorado	34							
Less than 1,000	11	715	756	51.03	68	73.88	1,591	10.50
1,000-1,999	6	2,899	9,708	45.42	145	66.90	5,248	13.75
2,000-7,999	10	5,966	4,659	48.50	303	75.00	7,288	12.70
8,000 and over	7	22,822	14,876	46.00	791	70.00	25,682	11.90

Of 141 feedlot operators who responded, 88 percent indicated they depended on commercial banks as the source of operating capital (app. table 34). Production credit associations were used by relatively more feedlots as a source of capital for operating investment than for fixed investment. Other agencies were less important, with only 3 percent indicating using this source. The majority of the feedlot operators in each region indicated that the commercial bank was their source of operating capital.

Interest rates paid by the feedlots for operating capital differed among regions and among size categories. The widest range of interest rates, 3.0 percent, was in Colorado. The narrowest range was 1.25 percent in California (app. table 35).

Source of Market Price Information

There are several sources of market price information available to feedlots. U.S. Department of Agriculture Market News, Yellow Sheet (National Provisioner Daily Market News Service) and U.S. Department of Agriculture dressed carcass quotations have been important sources of price information. In recent years, cattle feeding associations have been formed and are also providing price information. Of the 155 operators who responded, 81 indicated they relied most on live cattle quotations (table 22). The majority of the California operators depended on other sources, but many relied chiefly on live cattle quotations. The basic source of price information to the Colorado feedlots was live cattle quotations. Forty percent of the operators indicated they considered other sources the most important. The majority of feedlots in the western Corn Belt, 66 percent, considered live cattle quotations as the most important source of price information.

The source of price information used in selling cattle by most of the 155 operators was their general knowledge of the market (table 22). Almost as many operators used live cattle quotations in selling cattle as considered it the most important source. The majority of operators in the western Corn Belt used their general knowledge in selling feedlot cattle; 33 of the operators, however, used live cattle quotations.

Most feedlots tend to depend on live cattle quotations as the most important source of price information but use their general knowledge of the market in making the selling decision.

Labor Requirement and Cost

Major improvements have been made in feedlot equipment in recent years, but the labor requirement for feedlots is a matter of concern. The problem of labor occurs primarily because of insufficient supply of labor to perform the jobs, and is common to feedlots regardless of size. Small feedlots find it difficult to obtain sufficient labor to assist both in the overall farming operation and in performing feedlot jobs. Large feedlots have difficulty in obtaining sufficient and qualified laborers to do the work required. The feedlot operators have increased wages and are providing benefits to present laborers to maintain employment in their feedlots.

Table 22.--Number of feedlot operators indicating most important source of price information and source of price information used in selling cattle, for geographic regions, 1966

Geographic region	Source of market price information							
	Live cattle quotations 1/		Dressed carcass quotations 1/		General knowledge of market 2/		Other 2/	
	Important	Used	Important	Used	Important	Used	Important	Used
Western Corn Belt	53	33	16	2	---	50	21	6
California	7	8	2	3	1	2	10	7
Colorado	21	22	3	2	3	12	18	8
Total	81	63	21	7	4	64	49	21

1/ U.S. Department of Agriculture Market News. A combination of sources of price information.

2/ Futures market quotations, yellow sheet quotations, advice of selling agent, etc.

Table 23.--Average labor requirements per feedlot by number of employees, hours employed, and wages paid, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967 1/

Geographic region and feedlots capacity size category	Feedlots responding	Average number of employers per feedlot	Average annual wages paid labor per head of cattle placed on feed	Average hourly wage paid to labor per feedlot	Average man-unit of labor per 100 head of cattle placed on feed 2/
	Number	Number	Dollars	Dollars	Man-units
Western Corn Belt	79				
Less than 1,000	43	2.0	2.25	.85	.39
1,000-1,999	21	2.8	3.39	1.77	.15
2,000-7,999	15	4.2	3.29	1.73	.09
California	17				
Less than 1,000	7	1.0	3.19	2.00	.13
1,000-1,999	1	1.6	3.73	1.05	.18
2,000-7,999	4	7.5	5.59	2.27	.11
8,000 and over	5	16.8	3.47	2.61	.06
Colorado	38				
Less than 1,000	14	2.4	4.18	1.37	.34
1,000-1,999	6	3.7	4.38	2.19	.13
2,000-7,999	9	4.6	3.61	2.55	.08
8,000 and over	9	11.9	2.04	2.65	.05

1/ Does not include benefits such as housing, utilities, insurance, bonus benefits, etc.

2/ Obtained by dividing number of employees per feedlot by total cattle placed on feed per feedlot for 12-month period.

The study attempted to determine the labor requirements for the feedlots in different regions and also the cost of labor excluding the benefits received by employees. Free housing, utilities, paid vacations, insurance, gasoline, meat, and bonus plans are a few of the benefits which are provided feedlot employees. Therefore, the labor cost underestimates the actual cost of labor by the value of benefits paid.

The data in table 23 give an indication of the total labor requirement and cost incurred by feedlots. Appendix table 36 gives a more detailed breakdown of the labor employed by listing jobs and wages.

The lots with a capacity of less than 2,000 in Colorado had a larger labor requirement than those in the other regions. The average annual wage per head of cattle placed on feed tended to be low for the lots with a capacity of under 1,000, increased to a peak in the lots with a capacity of 1,000 to 1,999 or 2,000 to 7,999, and decreased for the lots with a capacity of 8,000 and over. For feedlots with less than a capacity of 2,000, the highest average wage paid per head placed on feed was in Colorado. The highest average annual wage per head of cattle placed on feed in the lots of a capacity of 2,000 or more was in California. Average hourly wage tended to increase as the size of lot increased. Colorado paid a higher hourly wage than the other regions for feedlots of all sizes except those with a capacity of less than 1,000. The western Corn Belt tended to pay lower hourly wages than other regions. The average man-units employed per hundred head of cattle placed on feed tended to decrease as the size of feedlot increased.

The middle-sized feedlots, with capacities of 1,000-1,999 or 2,000-7,999, tend to have a higher labor investment per animal than lots of other sizes. This relatively high labor investment may be attributed to the lack of labor-saving equipment which made it necessary to hire more units of labor per animal than would be needed for the other size categories. In small feedlots, labor came primarily from the operator for whom hourly wages were not usually known. The middle-sized lots employed most of their labor. Although they may have had more feedlot equipment than small feedlots, they did not have as much equipment as large lots.

The relationship between size of feedlot and hourly wage suggests that feedlots tended to be competitive for the labor supply. Large feedlots usually paid higher hourly wages than other sized lots to maintain their labor force.

The relationship between size of feedlot and man-units employed suggests that some advantages may be received by large feedlots where specialization of the labor force is employed. Individuals in the labor force of large lots perform specific jobs and are not responsible for other jobs which are to be performed. The labor in small lots tends to be nonspecialized with one person responsible for several jobs.

CONCLUSIONS

The primary objectives of the study were to determine the characteristics of cattle feeding operations in California, Colorado, and the western Corn Belt and to indicate specific problems which feedlots were experiencing. Considering these objectives, there are two important areas which merit attention--(1) the problems revealed by the study and some of the implications which can be made from these problems, and (2) the areas concerning feedlot operations which need further research and analysis.

There is a lack of coordination in grades of cattle placed on feed, cattle marketed, and quality of beef desired by consumers. Efforts are needed to provide feedlot operators with information of the quality desired by consumers.

Assistance is needed to facilitate and standardize terms of trade between feedlot operators and cattle buyers when cattle are sold on a direct live weight basis. The U.S. Department of Agriculture has taken steps to improve carcass grade and carcass weight regulations which should assist both sellers and buyers of feedlot cattle. The majority of the feedlot cattle in the study were sold on a direct live weight basis and the terms of arrangements were often unspecified.

Each region in the study area faces the problem of obtaining feedlot cattle for future needs. With the rapid expansion of cattle feeding and of the slaughtering industry in Texas and Oklahoma, doubt arises as to where California, Colorado, and the western Corn Belt feedlots will obtain cattle. Assuming that Texas and Oklahoma will place most of their own cattle on feed, the regions under study may be forced to produce their own cattle, obtain cattle from regions other than Texas and Oklahoma, or reduce their feeding operations.

Labor is also a critical problem in each feeding region. The supply and quality of labor desired for feedlots is limited. This limitation has resulted in competition for the available labor supply, increased feedlot labor cost through higher hourly wage rates, and increased employee benefit plans; these problems have resulted in a decrease in size of some feedlot operations.

The future of feedlots, especially of small operations, may also be considered as a problem. There are many disadvantages which seem to be inherent in small feedlots. Specialization of labor and species of livestock fed, lower man-unit requirements, and better resource allocation and management are a few advantages of large feedlots. Large feedlots provide cattle buyers with a large number of uniform cattle. Small feedlots tend to market a small number and market cattle which are not uniform. Excess capacity also appears to be more prevalent in small feedlots then in large feedlots. The principal business of the owner and type of ownership organization may be limiting factors in small feedlots.

There may be inefficiencies within the marketing channels for cattle. The data indicate that only a small proportion of cattle are marketed through terminal markets. This and other factors indicate that these markets may

better serve the feedlot industry by changing from the traditional function of assembling cattle for a buying and selling operation to either a market where cattle are bought and sold on description or to a centralized market information center that collects and disseminates data on direct sales.

There are several areas of the cattle feedlot industry which require further research and throughout this study several hypotheses have been indicated. The exact relationships among structural variables to conduct and performance measures need to be explored. Such factors as type of ownership, principal business of owners, size of feedlots, etc., should be explained and related to the behavior and performance of feedlot operations.

The influence of integration in both horizontal and vertical context should be developed. The determination of the influence which each of these concepts have on feedlot operations should assist in the understanding and performance of the industry.

An additional area for investigation pertains to policies of lending agencies from which feedlots obtain capital. It is suggested that differences in the policies of lending agencies may be important in explaining structure, conduct, and performance which are common to the feeding regions.

Consumer and packer preferences as indicated by the demand of beef should be inspected. As this study indicates, there are differences in the marketing weights of cattle in each of the regions. This suggests that differences may exist in the type of beef which consumers and packers demand. If marketing weights are not in agreement with the demand preferences, changes should probably occur in marketing weights. This is especially true in the western Corn Belt where the cost of feeding likely is higher than in other regions because of the heavier marketing weights of cattle and greater length of time on feed.

Table 24.--Sample design for the three cattle feeding regions, by feedlot capacity size categories

Geographic region and feedlot capacity size category	Feedlots 1/	Sample	Sampling rate
	Number	Interval	Percent
Western Corn Belt 2/:			
Less than 1,000...	88,000	Every 88 lots	.1
1,000-1,999.....	188	Every 4th name	25.0
2,000-7,999.....	82	Every 3d name	33.0
8,000 and over....	2	Every 2d name	50.0
Total.....	88,272		
California			
Less than 1,000...	275	Every 11 lots	4.0
1,000-1,999.....	50	Every 10th name	10.0
2,000-7,999.....	80	Every 10th name	10.0
8,000 and over....	60	Every 10th name	10.0
Total.....	465		
Colorado			
Less than 1,000...	1,100	Every 22 lots	2.0
1,000-1,999.....	28	Every 4th name	25.0
2,000-7,999.....	42	Every 3d name	33.0
8,000 and over....	23	Every 2d name	47.0
Total.....	1,193		

1/ Number of feedlots is based on 1964 data reported in Statistical Reporting Service Report 9.

2/ This region is composed of Northeastern Nebraska, Iowa, and Minnesota.

Table 25.--Sample and replacement number and schedules completed and not completed for the three cattle feeding regions, by feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Primary sample 1/	Replacement sample 2/	Schedules completed 3/	Schedules not completed	Reasons for noncompletion: Nonfeeders	Refusal	Location Problems
	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt							
Less than 1,000	88	13	47	54	15	20	19
1,000-1,999	47	5	25	27	12	2	13
2,000-7,999	27	3	18	12	6	4	2
Total	162	21	90	93			
California							
Less than 1,000	11	1	8	4	1	1	2
1,000-1,999	5	1	2	4	3	---	1
2,000-7,999	8	4/	7	1	---	---	1
8,000 and over	6	1	5	2	---	2	---
Total	30	3	22	11			
Colorado							
Less than 1,000	22	5	16	11	4	4	3
1,000-1,999	7	2	7	2	1	---	1
2,000-7,999	14	3	12	5	1	1	3
8,000 and over	11	2	10	3	---	1	2
Total	54	12	45	21			

1/ Initial sample drawn.

2/ Sample to be used in case operator of feedlot in primary sample fails to respond.

3/ Responses received from feedlot operators by data collector.

4/ No replacement was drawn as samples were drawn originally from 2,000-3,999 lots and 4,000-7,999 lots (four from each). A replacement was not drawn for samples involving less than five lots.

Table 26.--Number and percentage of feedlots classified by type of feeding operation, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Type of feeding operations				Total	
	Warmup		Finishing			
	Number	Percent	Number	Percent	Number	Percent
Western Corn Belt	3	3	86	97	89	100
Less than 1,000	2	4	44	96	46	100
1,000-1,999	1	4	24	96	25	100
2,000-7,999	---	---	18	100	18	100
California	2	9	20	91	22	100
Less than 1,000	2	25	6	75	8	100
1,000-1,999	---	---	2	100	2	100
2,000-7,999	---	---	7	100	7	100
8,000 and over	---	---	5	100	5	100
Colorado	4	9	41	91	45	100
Less than 1,000	3	19	13	81	16	100
1,000-1,999	---	---	7	100	7	100
2,000-7,999	1	8	11	92	12	100
8,000 and over	---	---	10	100	10	100
Total	9	6	147	94	156 1/	100

1/ Operator did not respond.

Table 27.--Number and percentage of feedlots classified, by specialized or diversified feedlots, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Feedlots feeding cattle and other livestock:				Total	
	Specialized		Diversified			
	Number	Percent	Number	Percent	Number	Percent
Western Corn Belt	36	40	53	60	89	100
Less than 1,000	9	19	38	81	47	100
1,000-1,999	12	50	12	50	24	100
2,000-7,999	15	83	3	17	18	100
California	18	82	4	18	22	100
Less than 1,000	6	75	2	25	8	100
1,000-1,999	2	100	---	---	2	100
2,000-7,999	6	86	1	14	7	100
8,000 and over	4	80	1	20	5	100
Colorado	36	80	9	20	45	100
Less than 1,000	12	75	4	25	16	100
1,000-1,999	6	86	1	14	7	100
2,000-7,999	10	83	2	17	12	100
8,000 and over	8	80	2	20	10	100
Total	90	58	66	45	156 1/	100

1/ Operator did not respond.

Table 28.--Number and percentage of cattle placed on feed, by breeds and crossbreeds, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Breeds and crossbreeds of cattle placed on feed							
		English and English crossbreeds	Brahma and Brahma crossbreeds	Okies	Dairy breeds and dairy crossbreeds	Santa Gertrudis, Charolais, and crossbreeds	Mexican cattle	Other	Total
	Number	Number	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	86	121,057	1,592	10,607	10,229	2,130	---	---	145,615
Less than 1,000	45	21,054	470	160	2,810	235	---	---	24,729
1,000-1,999	25	34,676	120	2,770	3,310	1,404	---	---	42,280
2,000-7,999	16	65,327	1,002	7,677	4,109	491	---	---	78,606
California	21	139,610	15,551	24,711	11,707	1,805	7,928	---	201,312
Less than 1,000	8	3,747	150	---	523	150	---	---	4,570
1,000-1,999	1	1,782	---	---	---	18	---	---	1,800
2,000-7,999	7	32,425	3,008	2,750	1,500	118	7,050	---	46,851
8,000 and over	5	101,656	12,393	21,961	9,684	1,519	878	---	148,091
Colorado	45	281,299	8,948	18,417	11,755	3,460	4,690	295	328,864
Less than 1,000	16	11,225	---	---	175	36	---	---	11,436
1,000-1,999	7	20,030	---	---	250	---	10	---	20,290
2,000-7,999	12	55,556	3,490	6,980	1,102	810	1,058	100	69,096
8,000 and over	10	194,488	5,458	11,437	10,228	2,614	3,622	195	228,042
Total	152	541,966	26,091	53,735	33,691	7,395	12,618	295	675,791
Less than 1,000	69	36,026	620	160	3,508	421	---	---	40,735
1,000-1,999	33	56,488	120	2,770	3,560	1,422	10	---	64,370
2,000-7,999	35	153,308	7,500	17,407	6,711	1,419	8,108	100	194,553
8,000 and over	15	296,144	17,851	33,398	19,912	4,133	4,500	195	376,133

Table 29.--Number and percentage of cattle fed by sex, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Sex of cattle placed on feed		
		Steers	Heifers	Total
	Number	Number	Number	Number
Western Corn Belt	90	114,644	58,566	173,210
Less than 1,000	47	15,333	9,297	24,630
1,000-1,999	25	41,626	22,854	64,480
2,000-7,999	18	57,685	26,416	84,100
California	20	173,446	25,702	199,164
Less than 1,000	8	3,175	1,410	4,601
1,000-1,999	1	1,800	---	1,800
2,000-7,999	6	30,433	14,418	44,851
8,000 and over	5	138,038	9,874	147,912
Colorado	45	142,529	187,260	329,798
Less than 1,000	16	4,532	5,147	9,688
1,000-1,999	7	8,799	11,492	20,291
2,000-7,999	12	37,882	33,713	71,595
8,000 and over	10	91,316	136,908	228,224
Total	155	430,619	271,528	702,172 1/
Less than 1,000	71	23,040	15,854	38,919
1,000-1,999	33	52,225	34,346	86,571
2,000-7,999	36	126,000	74,546	200,546
8,000 and over	15	229,354	146,782	376,136
	Percentage distribution			
		Percent	Percent	Percent
Western Corn Belt		66	34	100
Less than 1,000		62	38	100
1,000-1,999		65	35	100
2,000-7,999		69	31	100
California		87	13	100
Less than 1,000		69	31	100
1,000-1,999		100	---	100
2,000-7,999		68	32	100
8,000 and over		93	7	100
Colorado		43	57	100
Less than 1,000		47	53	100
1,000-1,999		43	57	100
2,000-7,999		53	47	100
8,000 and over		40	60	100
Total		61	39	100
Less than 1,000		59	41	100
1,000-1,999		60	40	100
2,000-7,999		63	37	100
8,000 and over		61	39	100

1/ A total of 25 bulls are included in this total.

Table 30.--Number of cattle fed by months of placements, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Months cattle placed on feed												
		July	August	September	October	November	December	January	February	March	April	May	June	Total
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
Western Corn Belt	70	9,225	10,330	15,697	18,944	14,566	9,815	10,200	12,548	11,101	11,020	8,239	8,553	140,238
Less than 1,000	38	2,043	2,937	3,729	2,700	3,665	3,175	2,442	2,364	2,201	2,318	1,951	1,993	31,518
1,000-1,999	17	2,557	2,257	3,092	3,494	4,459	2,493	2,317	2,827	2,824	2,595	2,273	2,100	33,288
2,000-7,999	15	4,625	5,136	8,876	12,750	6,442	4,147	5,441	7,357	6,076	6,107	4,015	4,460	75,432
California	17	17,775	17,075	20,138	19,940	13,763	12,859	8,180	7,602	16,507	12,342	15,071	20,276	181,528
Less than 1,000	8	805	340	480	390	381	320	390	320	260	300	245	245	4,556
1,000-1,999	0	---	---	---	---	---	---	---	---	---	---	---	---	---
2,000-7,999	4	1,407	2,257	6,007	5,636	4,036	2,436	357	1,107	357	2,793	2,793	2,793	31,979
8,000 and over	5	15,483	14,478	13,651	13,914	9,346	10,103	7,433	6,175	15,890	9,249	12,033	17,238	144,993
Colorado	40	20,360	19,942	34,033	44,741	28,754	25,535	22,931	21,809	27,243	26,860	27,075	28,564	327,847
Less than 1,000	12	903	308	823	3,028	1,666	372	810	138	1,384	256	748	420	10,856
1,000-1,999	7	1,089	933	2,035	3,082	2,332	1,683	945	777	1,839	1,752	2,508	1,297	20,272
2,000-7,999	11	4,243	4,843	6,492	11,299	4,958	5,332	3,316	3,584	4,600	4,563	3,934	2,995	60,159
8,000 and over	10	14,125	13,858	24,683	27,332	19,798	18,148	17,860	17,310	19,420	20,289	19,885	23,852	236,560
Total	127	47,360	47,347	69,868	83,625	57,083	48,209	41,311	41,959	54,851	50,222	50,385	57,393	649,613
Less than 1,000	58	3,831	3,585	5,032	6,118	5,712	3,867	3,642	2,822	3,845	2,874	2,944	2,658	46,930
1,000-1,999	24	3,646	3,190	5,127	6,576	6,791	4,176	3,262	3,604	4,663	4,347	4,781	3,397	53,560
2,000-7,999	30	10,275	12,236	21,375	29,685	15,436	11,915	9,114	12,048	11,033	13,463	10,742	10,248	167,570
8,000 and over	15	29,608	28,336	38,334	41,246	29,144	28,251	25,293	23,485	35,310	29,538	31,918	41,090	381,553

Table 31.--Number and percentage of cattle lost while on feed and during marketing, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic region and feedlot capacity size category	Feedlots responding	Death and marketing loss: Cattle lost while on feed	Death and marketing loss: Cattle lost during marketing	Percentage of placements	Percentage of marketings	Total
	Number	Number	Number	Percent	Percent	Number
Western Corn Belt	90	1,156	15	0.7	.010	1,171
Less than 1,000	47	243	9	1.0	.036	252
1,000-1,999	25	375	5	0.8	.011	380
2,000-7,999	18	538	1	0.6	.001	539
California	21	71	2	1/	.001	73
Less than 1,000	8	37	1	0.8	.022	38
1,000-1,999	1	25	---	1.4	---	25
2,000-7,999	7	9	1	1/	.002	10
8,000 and over	5	---	---	---	---	---
Colorado	45	2,025	10	0.6	.003	2,035
Less than 1,000	16	57	1	0.5	.009	58
1,000-1,999	7	101	1	0.5	.005	102
2,000-7,999	12	233	6	0.3	.010	239
8,000 and over	10	1,634	2	0.7	.001	1,636
Total	156	3,252	27	0.5	.004	3,279
Less than 1,000	71	337	11	0.8	.027	348
1,000-1,999	33	501	6	0.7	.009	507
2,000-7,999	37	780	8	0.4	.004	788
8,000 and over	15	1,634	2	0.4	.001	1,636

1/ Less than 0.5 percent.

Table 32.--Number and percentage of custom and noncustom feedlot operations, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Custom feeding operations: Yes		Custom feeding operations: No		Total	
	Number	Percent	Number	Percent	Number	Percent
Western Corn Belt	3	4	78	96	81	100
Less than 1,000	---	---	46	100	46	100
1,000-1,999	1	4	24	96	25	100
2,000-7,999	2	20	8	80	10	100
California	6	27	16	73	22	100
Less than 1,000	---	---	8	100	8	100
1,000-1,999	---	---	2	100	2	100
2,000-7,999	1	14	6	86	7	100
8,000 and over	5	100	---	---	5	100
Colorado	8	18	37	82	45	100
Less than 1,000	---	---	16	100	16	100
1,000-1,999	1	14	6	86	7	100
2,000-7,999	3	25	9	75	12	100
8,000 and over	4	40	6	60	10	100
Total	17	11	131	89	148 1/	100

1/ Nine operators did not respond.

Table 33.--Number and percentage of feedlots, by source of capital for fixed investments, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Source of capital for fixed investment: Commercial bank	Production credit associations	Other 1/	Total
	Number	Number	Number	Number
Western Corn Belt	71	3	2	76
Less than 1,000	35	3	1	39
1,000-1,999	21	---	---	21
2,000-7,999	15	---	1	16
California	14	1	5	20
Less than 1,000	8	---	---	8
1,000-1,999	1	---	---	1
2,000-7,999	2	1	3	6
8,000 and over	3	---	2	5
Colorado	34	4	7	45
Less than 1,000	15	1	---	16
1,000-1,999	3	---	4	7
2,000-7,999	6	3	3	12
8,000 and over	10	---	---	10
Total	119	8	14	141 2/
Less than 1,000	58	4	1	63
1,000-1,999	25	---	4	29
2,000-7,999	23	4	7	34
8,000 and over	13	---	2	15
	Percentage distribution			
	Percent	Percent	Percent	Percent
Western Corn Belt	93	4	3	100
Less than 1,000	90	8	2	100
1,000-1,999	100	---	---	100
2,000-7,999	94	---	6	100
California	70	5	25	100
Less than 1,000	100	---	---	100
1,000-1,999	100	---	---	100
2,000-7,999	33	17	50	100
8,000 and over	60	---	40	100
Colorado	76	9	15	100
Less than 1,000	94	6	---	100
1,000-1,999	43	---	57	100
2,000-7,999	50	25	25	100
8,000 and over	100	---	---	100
Total	84	6	10	100
Less than 1,000	92	6	2	100
1,000-1,999	86	---	14	100
2,000-7,999	68	12	20	100
8,000 and over	87	---	13	100

1/ Includes insurance companies, National Credit Corporation, etc.
2/ Sixteen operators did not respond.

Table 34.--Number and percentage of feedlots, by source of capital for operating investment, for geographic regions and feedlot capacity size categories, 1967

Geographic region and feedlot capacity size category	Source of capital for operating investment: Commercial bank	Production credit associations	Other 1/	Total
	Number	Number	Number	Number
Western Corn Belt	68	7	1	76
Less than 1,000	35	4	1	40
1,000-1,999	20	1	---	21
2,000-7,999	13	2	---	15
California	17	1	2	20
Less than 1,000	7	---	1	8
1,000-1,999	1	---	---	1
2,000-7,999	5	1	---	6
8,000 and over	4	---	1	5
Colorado	39	4	2	45
Less than 1,000	14	1	1	16
1,000-1,999	7	---	---	7
2,000-7,999	9	3	---	12
8,000 and over	9	---	1	10
Total	124	12	5	141 2/
Less than 1,000	56	5	3	64
1,000-1,999	28	1	---	29
2,000-7,999	27	6	---	33
8,000 and over	13	---	2	15
	Percentage distribution			
	Percent	Percent	Percent	Percent
Western Corn Belt	90	9	1	100
Less than 1,000	87	10	3	100
1,000-1,999	95	5	---	100
2,000-7,999	87	13	---	100
California	85	5	10	100
Less than 1,000	88	---	12	100
1,000-1,999	100	---	---	100
2,000-7,999	83	17	---	100
8,000 and over	80	---	20	100
Colorado	87	9	4	100
Less than 1,000	88	6	6	100
1,000-1,999	100	---	---	100
2,000-7,999	75	25	---	100
8,000 and over	90	---	10	100
Total	88	9	3	100
Less than 1,000	87	8	5	100
1,000-1,999	97	3	---	100
2,000-7,999	82	18	---	100
8,000 and over	87	---	13	100

1/ Includes insurance companies, National Credit Corporation, etc.
2/ Sixteen operators did not respond.

Table 35.--Range of interest rates paid and average interest rate paid by feedlot operations for operating capital, 1/ for geographic regions and feedlot capacity size categories, 1967

Geographic regions and feedlot capacity size categories	Feedlots responding	Range of interest rates paid by feedlots	Average interest rate paid by feedlots
	Number	Percent	Percent
Western Corn Belt	49	5.5 to 7.5	6.48
Less than 1,000	29	5.5 to 7.5	6.47
1,000-1,999	11	6.0 to 7.0	6.57
2,000-7,999	9	6.0 to 6.75	6.33
California	10	6.25 to 7.5	6.75
Less than 1,000	3	6.25 to 7.5	6.81
1,000-1,999	1	6.5	6.5
2,000-7,999	4	6.5 to 7.0	6.75
8,000 and over	2	6.5 to 7.0	6.75
Colorado	25	4.5 to 7.5	6.71
Less than 1,000	9	4.5 to 7.5	6.13
1,000-1,999	5	7.0 to 7.5	7.25
2,000-7,999	5	6.5 to 7.0	6.89
8,000 and over	6	6.5 to 7.0	6.75

1/ A total of 84 operators responded to interest rates paid.

Table 36.--Average number of employees, hours worked, and wages per month, by type of labor for feedlots, for geographic regions and feedlot capacity size categories, July 1, 1966, to June 30, 1967

Geographic regions and feedlot capacity size category	Employed by feedlots					
	Operator			Yard foreman		
	Average number per feedlot	Hours worked per month per feedlot	Wages per month per feedlot	Average number per feedlot	Hours worked per month per feedlot	Wages per month per feedlot
	Number	Hours	Dollars	Number	Hours	Dollars
Western Corn Belt:						
Less than 1,000	1.1	72.9	1/	.1	11.6	16.30
1,000-1,999	1.2	114.0	1/	.2	25.5	36.80
2,000-7,999	1.1	158.0	312.25	.3	42.7	100.00
California						
Less than 1,000	1.0	102.0	203.67	1/	1/	1/
1,000-1,999	1.0	80.0	1/	1/	1/	1/
2,000-7,999	1.0	170.4	595.80	.8	190.0	562.50
8,000 and over	1.0	261.0	988.67	1.0	226.0	725.00
Colorado						
Less than 1,000	1.3	111.2	1/	1/	1/	1/
1,000-1,999	1.2	157.0	248.00	.2	36.6	75.00
2,000-7,999	1.0	211.4	590.00	.6	70.0	156.00
8,000 and over	1.0	258.4	628.00	1.0	187.5	547.25
	Mill foreman			Feeder		
Western Corn Belt:						
Less than 1,000	1/	1/	1/	.4	31.7	82.10
1,000-1,999	1/	1/	1/	1.4	156.0	485.95
2,000-7,999	.2	31.3	52.50	2.2	472.7	730.50
California						
Less than 1,000	1/	1/	1/	1/	1/	1/
1,000-1,999	.3	93.0	140.00	.3	93.0	140.00
2,000-7,999	.5	104.0	242.00	1.5	270.0	636.00
8,000 and over	1.8	324.0	850.00	2.6	636.0	1228.00
Colorado						
Less than 1,000	.1	2.5	35.00	.4	47.5	107.90
1,000-1,999	.1	3.0	19.50	1.6	239.8	587.33
2,000-7,999	.3	44.0	99.27	1.0	141.8	393.30
8,000 and over	1.0	200.0	471.90	3.6	354.0	826.00
	Cowboy			Office manager		
Western Corn Belt:						
Less than 1,000	.4	1/	1/	1/	1/	1/
1,000-1,999	1/	1/	1/	1/	1/	1/
2,000-7,999	1/	1/	1/	.1	19.8	1/
California						
Less than 1,000	1/	1/	1/	1/	1/	1/
1,000-1,999	1/	1/	1/	1/	1/	1/
2,000-7,999	2.0	176.0	41.20	.2	32.0	200.00
8,000 and over	4.2	1056.0	1991.20	1.0	160.0	655.00
Colorado						
Less than 1,000	.1	1.5	8.00	1/	1/	1/
1,000-1,999	.2	16.3	82.00	.2	6.5	20.00
2,000-7,999	.3	44.0	108.40	.2	24.0	55.60
8,000 and over	2.8	222.5	642.44	.6	87.0	288.90
	Others 2/			Total		
Western Corn Belt:						
Less than 1,000	1/	1/	1/	2.0	116.2	98.40
1,000-1,999	1/	1/	1/	2.8	295.5	522.75
2,000-7,999	.3	17.2	84.00	4.2	741.7	1279.25
California						
Less than 1,000	1/	1/	1/	1.0	102.0	203.67
1,000-1,999	1/	1/	1/	1.6	266.0	280.00
2,000-7,999	1.3	429.6	838.00	7.5	1372.0	3115.50
8,000 and over	5.2	612.8	2107.80	16.8	3275.8	8545.67
Colorado						
Less than 1,000	.5	19.3	98.00	2.4	182.0	248.90
1,000-1,999	.2	26.7	26.67	3.7	485.9	1058.50
2,000-7,999	1.2	168.8	391.60	4.6	704.0	1794.17
8,000 and over	1.9	212.4	481.00	11.9	1521.8	3885.49

1/ No estimates made. 2/ Includes assistant yard foreman, consultant, family labor, etc.

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